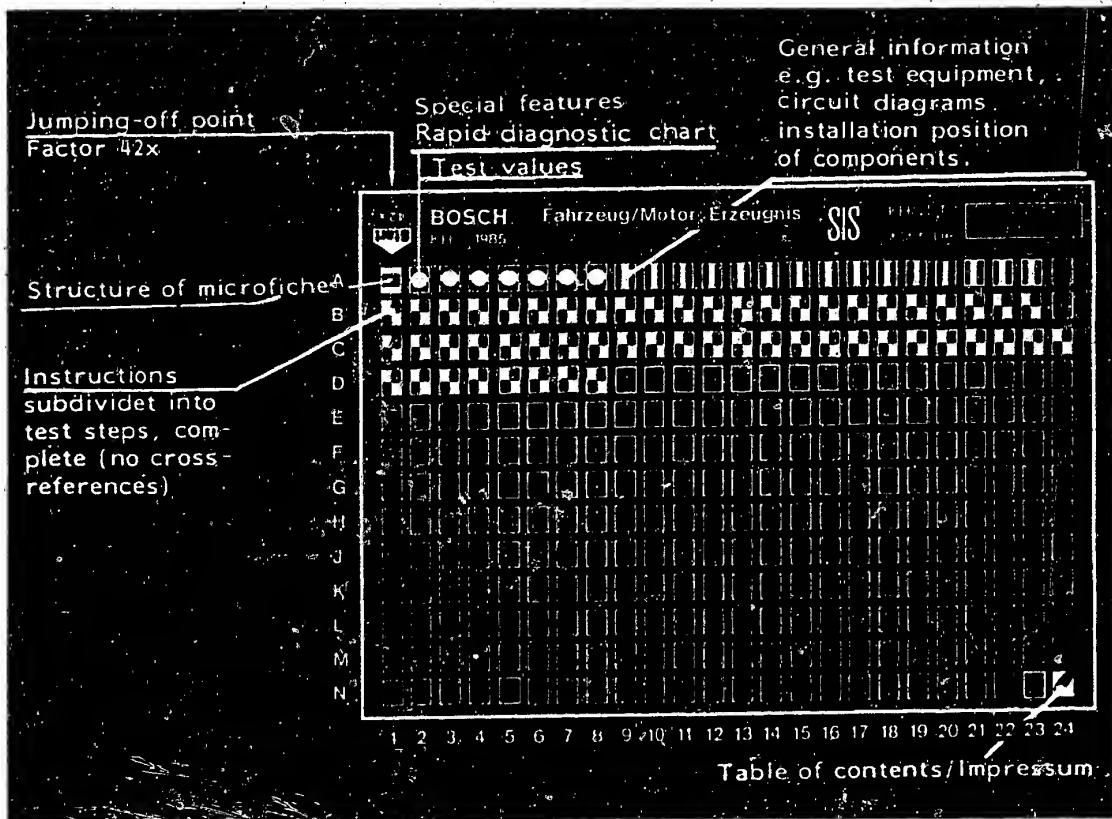


Structure of microfiche



1. Read from left to right
2. Title of microfiche (appears on each coordinate)

E16	Product/component/test step
	Vehicle/engine

↑ Coordinate

3. Limits of section

Beginning	Mid-section	End	One-page section

4. References to relevant test steps in test specifications; coordinate e.g. C6

C6

A1	Trouble-shooting program	
-----------	--------------------------	--

1. Special features

With these instructions it is possible to test Mercedes-Benz passenger cars of type W 124 in which an electronic automatic heating and air conditioning system (Tempmatik) is installed as an optional extra.

2. Rapid diagnosis chart for heating and air conditioning test adapter

The following rapid diagnosis chart makes it possible for the experienced expert to quickly check the system with the test adapter KDHK 0001.

The contents of this chart are limited to the following:

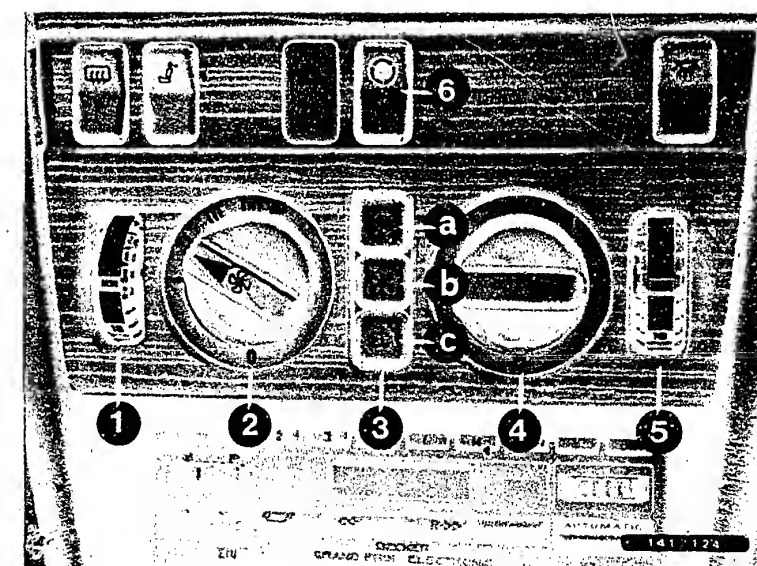
- Sequence of test steps
- Switch positions on adapter
- Test instructions and test specifications (readings on adapter)
- References to coordinates of the respective detailed testing and trouble-shooting program.

If detailed instructions and information are required, always proceed according to the trouble-shooting program starting on Coordinate B1.

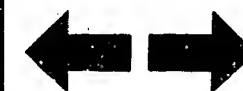
Make sure of the following before testing:

- Check customer complaints (check operation of automatic heating and air conditioning system in accordance with vehicle owner manual)
- Coolant level O.K.
- Refrigerant level O.K.
- Engine running and at normal operating temperature
- Electrical system (fuses, battery voltage) O.K.
- Blower switch at position IIII or blower running at max. speed
- Left-hand and right-hand temperature selector thumbwheels approximately in center position (22)
- Air-distributor switch on vehicle to footwell position
- Fresh-air/recirculated-air switch at fresh-air position
- Air conditioning switch at position "a"

The ignition must be off when disconnecting plug-in connections.



- 1 = Left-hand temperature selector thumbwheel
- 2 = Blower switch
- 3 = Air conditioning switch
- a) = Air conditioning compressor on
- b) = Air conditioning compressor is switched on as required
- c) = Air conditioning compressor off
- 4 = Air-distributor switch
- 5 = Right-hand temperature selector thumbwheel
- 6 = Fresh-air/recirculated air switch



Rapid diagnosis chart for electronic automatic heating and air conditioning system (Tempmatik)

Test adapter KDHK 0001 with adapter lead KDHK 0008

Test step	Rotary switch position	Testing of	Test instructions	Reading Test specification	Coordinates
1	1	Electronic control unit power supply	Engine running and at normal operating temperature	10 ... 15	B 4
2	2	Passenger-compartment temperature sensor	Auxiliary switch in adapter lead to position "I"	5 ... 11	B 6
2.1			Spray refrigerant spray into passenger-compartment temperature sensor	falling while cooling down	B 8
2.2			Check air admission to passenger-compartment temperature sensor (with paper strip)		B 10
2.3		Outside-temperature sensor	Auxiliary switch on adapter lead to position "A"	9 ... 12	B 12
3	3	Left-hand temperature selector thumbwheel	Turn temperature selector thumbwheel from end to end. Reading must change uniformly between "before min latched" position and "before max latched" position. Note: After testing, return temperature selector thumbwheel to center position	approx. 2.5 ... 6.5 "max" latched position: approx. 12 "Min" latched pos.: approx. 0	B 14
4	4	Right-hand temperature selector thumbwheel	Turn temperature selector thumbwheel from end to end. Reading must change uniformly between "before min latched" position and "before max latched" position. Note: After testing, return temperature selector thumbwheel to center position	approx. 2.5 ... 6.5 "max" latched pos.: approx. 12 "Min" latched pos.: approx. 0	B 16
5	5	Evaporator temperature sensor		5 ... 12	B 18
6	6	Heating-water pump	Switch on auxiliary switch (S) on test adapter. Heating-water pump running - check by feeling/listening	0 ... 3	B 20

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Rapid diagnosis chart
Mercedes-Benz W 124



A5

Rapid diagnosis chart
Mercedes-Benz W 124



Rapid diagnosis chart for electronic automatic heating and air conditioning system (Tempmatik) (Continued)

Test adapter KDHK 0001 with adapter lead KDHK 0008

Test step	Rotary switch position	Testing of	Test instructions	Reading Test specifications	Coordinates
6.1	6	Heating-water pump	Switch off auxiliary switch (S) on test adapter <u>Heating-water pump not running</u> - check by feeling/listening	9 ... 14	B 22
7	7	Left-hand heating-water valve	Blower switch to position IIII Switch on auxiliary switch (S) on test adapter. <u>No heating effect on left</u> - check by feeling	0 ... 3	C 1
7.1			Switch off auxiliary switch (S) on test adapter. <u>Heating effect on left</u> - check by feeling.	9 ... 14	C 3
8	8	Left-hand blow-in temperature sensor	Test step must come directly after 7.1 (water in heat exchanger must be hot at start of test).	7 ... 12 slowly falling	C 5
9	9	Right-hand heating-water valve	Switch on auxiliary switch (S) on test adapter. <u>No heating effect on right</u> - check by feeling	0 ... 3	C 7
9.1			Switch off auxiliary switch (S) on test adapter. <u>Heating effect on right</u> - check by feeling.	9 ... 14	C 9
10	10	Right-hand blow-in temperature sensor	Test step must come directly after 9.1 (water in heat exchanger must be hot at start of test).	7 ... 12 slowly falling	C 11
11	12	Refrigerant compressor magnetic clutch	Switch on auxiliary switch (S) on test adapter. Refrigerant compressor must switch on (wait approx. 10 sec. for system to adapt). Supply air is greatly cooled - check by feeling.	0 ... 3	C 13
11.1			Switch off auxiliary switch (S) on test adapter. Refrigerant compressor must switch off. Supply air is no longer cooled - check by feeling.	9 ... 14	C 15

A6

Rapid diagnosis chart
Mercedes-Benz W 124



A7

Rapid diagnosis chart
Mercedes-Benz W 124



Rapid diagnosis chart for electronic automatic heating and air conditioning system (Tempmatik) (Continued)

Test adapter KDHK 0001 with adapter lead KDhK 0008

Test step	Rotary switch position	Testing of	Test instructions	Reading Test specifications	Coordinates
12	13	Air conditioning switch	Air conditioning switch at position "a" (AC mode)	10 ... 15	C 17
12.1			Air conditioning switch at position "c" (EC mode)	0 ... 3	C 19
12.2			Air conditioning switch at position "b" (DEF mode)	0 ... 3	C 21
13	15	Refrigerant compressor control power supply	Air conditioning switch at position "c" (EC mode)	0 ... 3	C 23
13.1			Air conditioning switch at position "b" (DEF mode)	10 ... 15	D 1
13.2			Air conditioning switch at position "a" (AC mode)	10 ... 15	D 3
	Testing with the heating/air conditioning test adapter is now completed. Set rotary switch (S1) on test adapter to "0"; switch off ignition; disconnect adapter lead KDHK 0008 from control-unit plug; connect control-unit plug to control unit; switch ignition back on.				
14	Fresh-air/Recirculated-air valve		Set fresh-air/recirculated-air switch to "recirculated air" position.	By listening, check whether fresh-air/re-circulated-air flap switches	D 6

A8

Rapid diagnosis chart
Mercedes-Benz W 124



A9

Rapid diagnosis chart
Mercedes-Benz W 124



3. General introduction

Automatic heating and air conditioning system

The passenger-compartment temperature is regulated by the electronic control unit, by a chain of resistors, consisting of two controllable resistors in the left-hand and right-hand temperature selector thumbwheels, and by a passenger-compartment temperature sensor, two temperature sensors on the heat exchangers, a temperature sensor on the evaporator and an outside-temperature sensor with temperature-sensitive resistors. The resistance is changed by the built-in potentiometer by turning a temperature selector thumbwheel. The passenger-compartment temperature sensor, the temperature sensors on the heat exchangers and the temperature sensor on the evaporator change their resistance in accordance with the ambient temperature. This total resistance value is compared in the electronic control unit.

Depending on the deviation, the passenger compartment is heated or cooled. The passenger-compartment temperature sensor is connected by a hose to the air jet on the blower box. With blower operating, air is drawn in from the passenger compartment through the opening of the passenger-compartment temperature sensor. This admission of air guarantees a shorter response time of the passenger-compartment temperature sensor and thus high control accuracy. The duo heating-water valve regulates the flow of coolant through the heat exchanger. It consists of two solenoid-operated valves which are energized by the electronic control unit. The opening/closing time depends on the deviation of the actual temperature from the setpoint temperature. With the selector thumbwheel latched in the "MIN" position, there is always voltage applied to the duo heating-water valve; it is closed. With the selector thumbwheel latched in the "MAX" position the duo heating-water valve is deenergized; it is fully open.



In addition to the controls of the automatic heating system, there is also a 3-part air conditioning switch for the A/C system.

1. Switch "a" pressed = refrigerant compressor on. In this position, the electronic control unit is over-ridden and the refrigerant compressor is constantly on (at outside temperature above approx. $+4^{\circ}\text{C}$). To prevent icing of the evaporator, the icing-protection switch switches the refrigerant compressor off at an evaporator temperature of $2^{\circ} \pm 1^{\circ}\text{C}$ and on again at approx. $5^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The selected temperature in the vehicle is regulated by heating. The air from the center jets remains cold. Thanks to the separation of moisture on the evaporator and the re-heating of the air, this operating mode is particularly suitable in damp weather, in order to clear up misted windows. This is particularly the case in rain in humid climates where, due to the high humidity, the tendency for the windows to mist up is so great that they can only be kept clear by drying the air.

2. Switch "b" pressed = refrigerant compressor is switched on as required. The refrigerant compressor switches on only at above $+5^{\circ}\text{C}$.

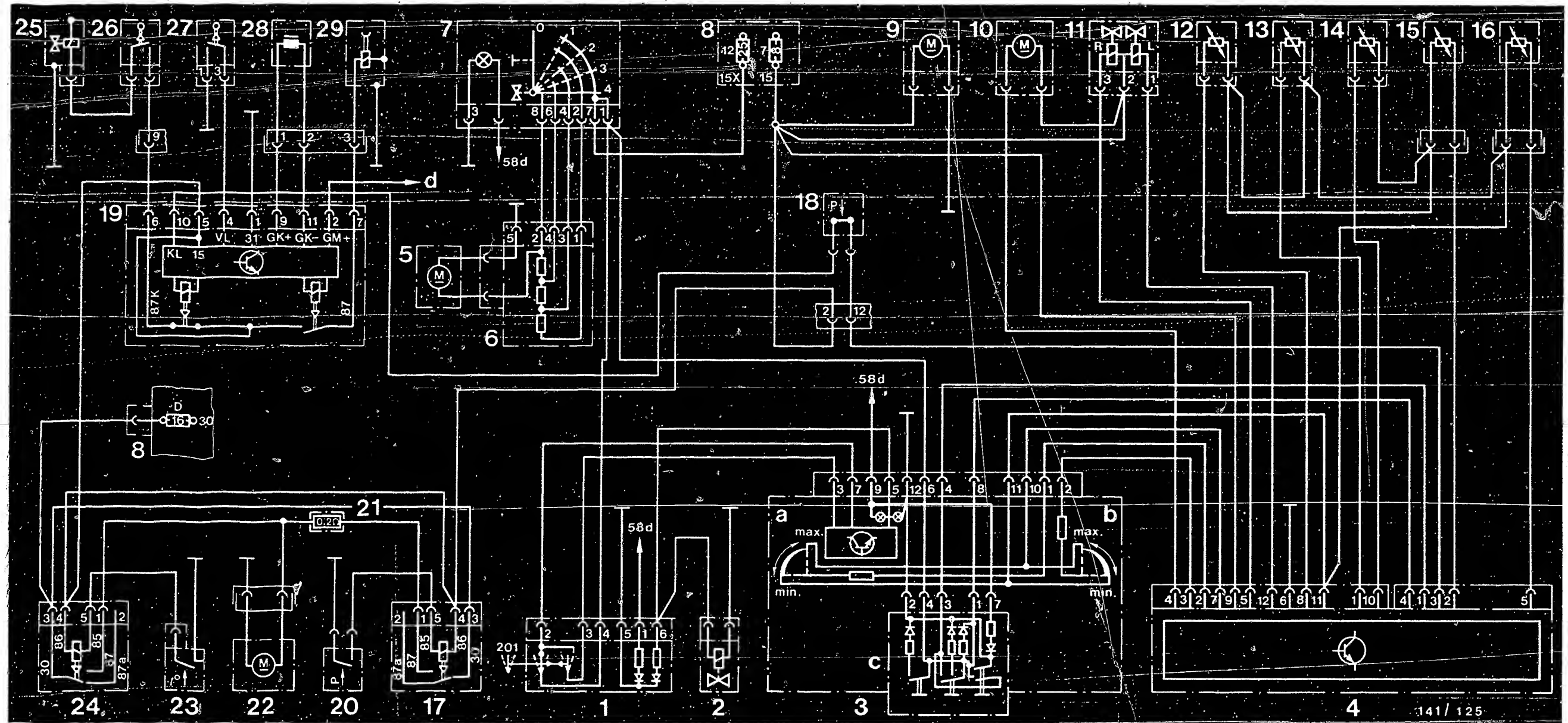
With the temperature selector thumbwheel latched in the "min" position the passenger-compartment temperature is regulated to approx. $10...15^{\circ}\text{C}$. When latched in the "max" position the passenger-compartment temperature is regulated to approx. 40°C .

In heating mode the system operates like the automatic heating system. If, however, the temperature in the vehicle rises above the setpoint, the refrigerant compressor begins to operate, controlled by the electronic control unit. The refrigeration output is regulated in accordance with the deviation of the actual value from the setpoint value.

3. Switch "c" pressed:

Refrigerant compressor off. (No switch pressed $\hat{=}$ position c). In this position, only the automatic heating system is in operation, i.e. the supply air is heated, if necessary. If the temperature in the vehicle rises above the setpoint (set at the temperature selector thumbwheel), untreated outside air is directed into the vehicle.





- 1 = Fresh-air/Recirculated-air switch
- 2 = Fresh-air/Recirculated-air valve
- 3 = Control panel

- a Left-hand temperature selector thumbwheel
- b Right-hand temperature selector thumbwheel
- c Air conditioning switch

- 4 = Automatic heating and air conditioning control unit

4. Basic circuit diagram of automatic heating and air conditioning system

- 5 = Blower motor
- 6 = Group of series resistors blower motor
- 7 = Air-flow switch
- 8 = Fuse and relay box
- 9 = Air-admission blower for passenger-compartment temperature sensor
- 10 = Heating-water pump
- 11 = Duo heating-water valve

- 12 = Blow-in temperature sensor (right)
- 13 = Blow-in temperature sensor (left)
- 14 = Passenger-compartment temperature sensor
- 15 = Evaporator temperature sensor
- 16 = Outside-temperature sensor

A12

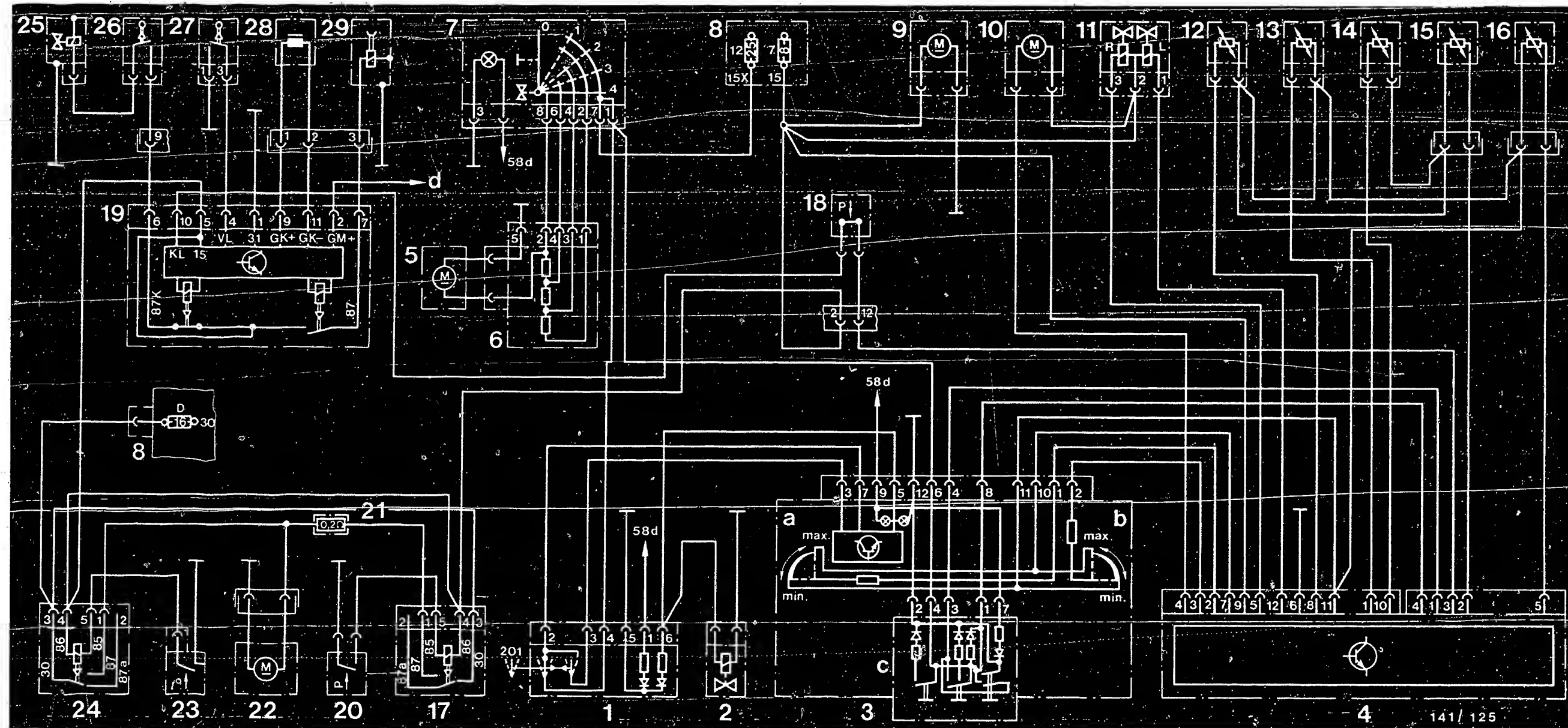
Basic circuit diagram
Mercedes-Benz W 124



A13

Basic circuit diagram
Mercedes-Benz W 124





- | | | |
|--|---|---|
| 17 = Series resistor auxiliary fan relay | 21 = Auxiliary fan series resistor | 26 = Kickdown switch |
| 18 = Refrigerant compressor pressure switch
Off 2.0 bar; on 2.6 bar | 22 = Auxiliary fan | 27 = Compressor cutoff microswitch |
| 19 = Refrigerant compressor cut-off control unit | 23 = Thermo-switch 110°C | 28 = Refrigerant compressor engine-speed sensor |
| 20 = Auxiliary fan pressure switch
Off 15 bar; on 20 bar | 24 = Auxiliary fan relay | 29 = Compressor clutch |
| | 25 = Automatic transmission change-over valve | d = TD signal |

Basic circuit diagram of automatic heating and air conditioning system (Continued)

A14

Basic circuit diagram
Mercedes-Benz W 124



A15

Basic circuit diagram
Mercedes-Benz W 124



5. Test equipment and tools

Heating and air conditioning test adapter KDHK 0001

Automatic heating and air conditioning
system adapter lead KDHK 0008

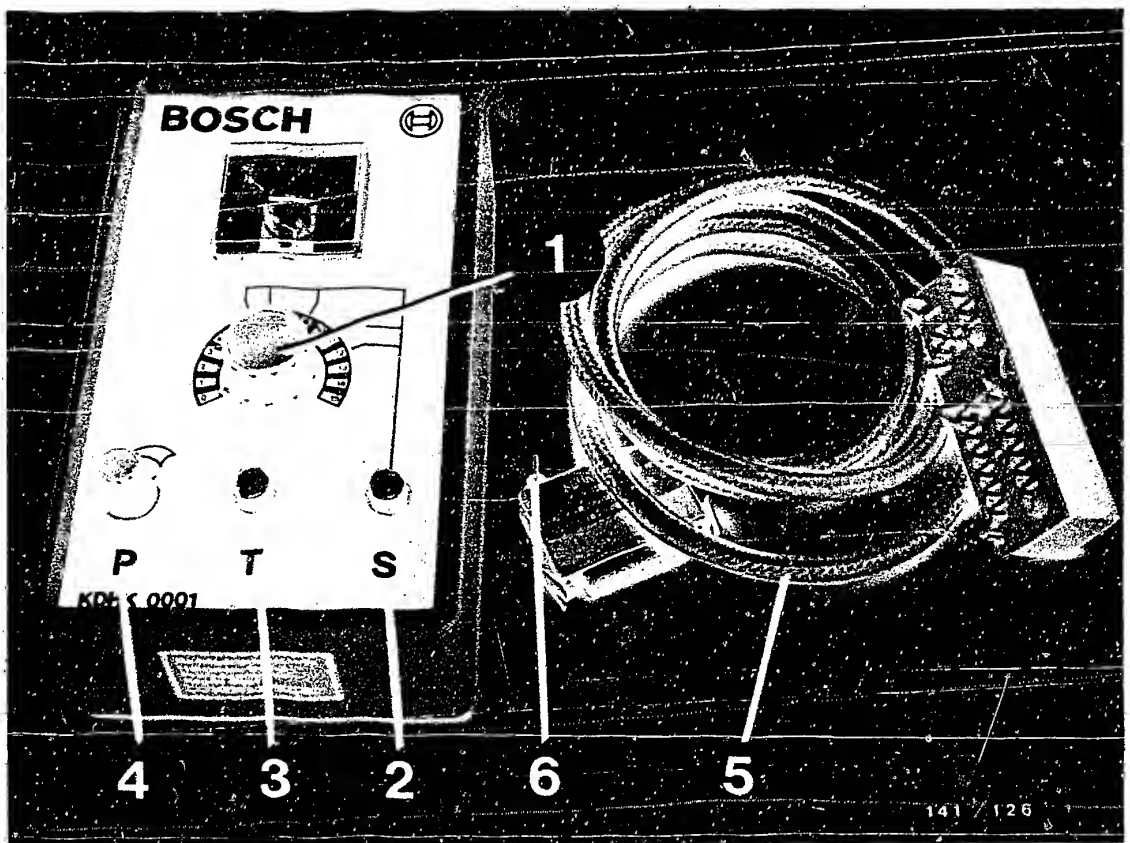
Multimeter ETE 014.00 0 684 101 400
or e.g. Pontavi commercially
available

Refrigerant spray commercially
available

A16

Test equipment and tools
Mercedes-Benz W 124





5.1 Heating and air conditioning test adapter (KDHK 0001)

- 1 = Rotary switch (S1)
- 2 = Auxiliary switch (S)
- 3 = Nonlocking switch (T)
- 4 = Potentiometer (P)
- 5 = Adapter lead for automatic heating and air conditioning system KDHK 0008
- 6 = Auxiliary switch in adapter lead



The heating and air conditioning test adapter is used for testing the peripherals of automatic heating and air conditioning systems. The electronic control units are not tested.

Construction

The test adapter is so designed that the individual components as well as the electric leads are switched on one after the other and measured with the rotary switch (S1). With the auxiliary switch (S) it is possible to test a specific group of components for 2 different functions. Nonlocking switch (T) is used for briefly switching on the refrigerant compressor. The potentiometer (P) is not used for Mercedes-Benz automatic heating and air conditioning system (Tempmatik).

Adapter lead KDHK 0008 is used for testing the automatic heating and air conditioning system.

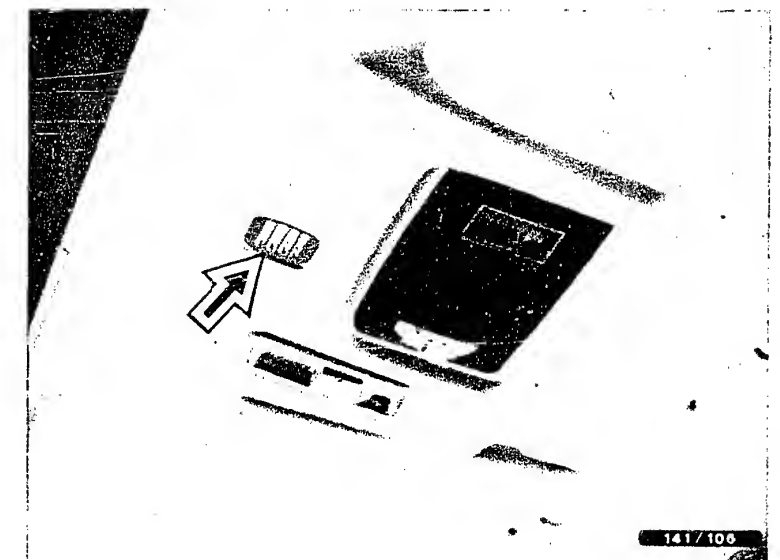
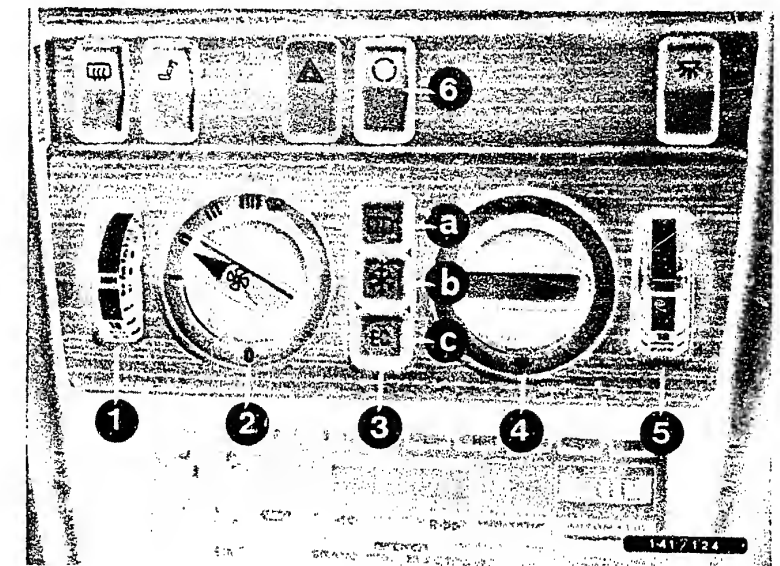
6. Installation position of components

The control panel is installed in the center console (see top picture).

Note: As of mid-1985 a modified, non-interchangeable control panel housing is installed. Control panel is identical as regards operation. With the switch (6) it is possible to switch from fresh-air to recirculated-air intake, i.e. approx. 80% recirculated air and approx. 20% fresh air, e.g. when there is a strong odor nuisance in city traffic or in stop-and-go traffic.

The passenger-compartment temperature sensor is in the roof above the interior lamp (see bottom picture). Removal and installation is through the opening of the interior lamp.

The auxiliary blower for air admission to the passenger-compartment temperature sensor (only on vehicles with sliding roof) is mounted under the glove compartment.



A18

Installation position of components

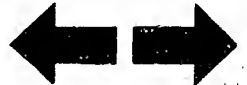
Mercedes-Benz W 124



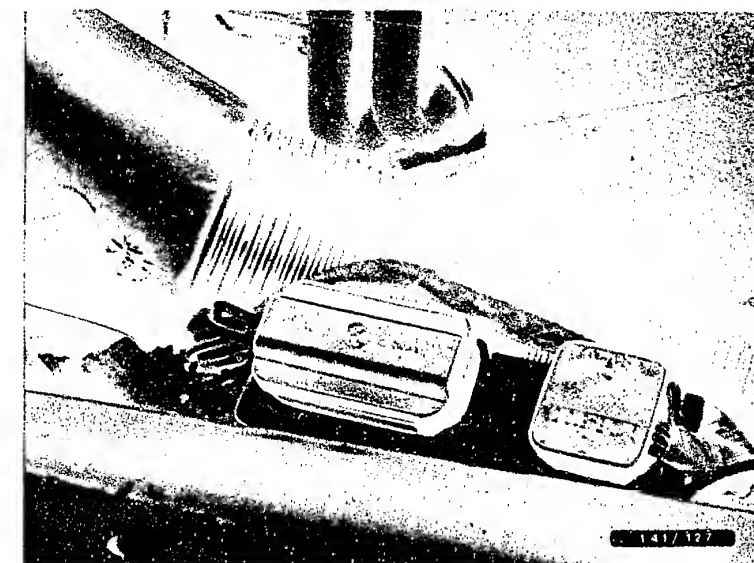
A19

Installation position of components

Mercedes-Benz W 124



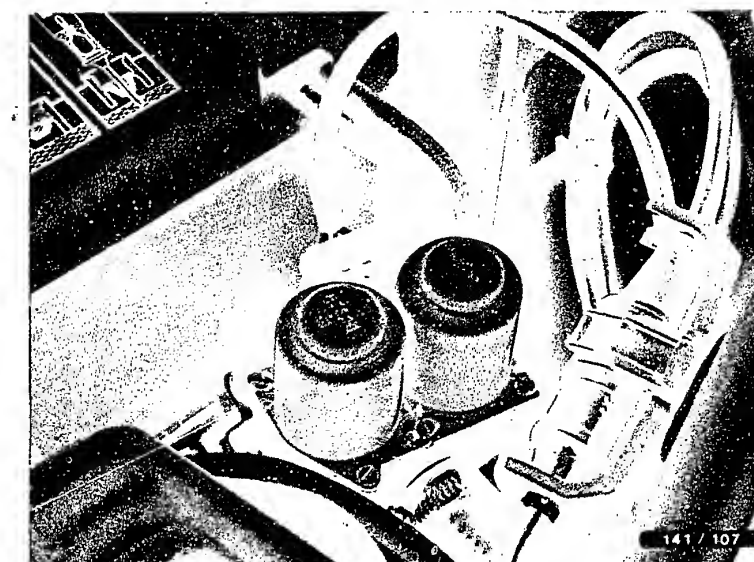
The electronic control unit is under the glove compartment (see top picture).
To remove and install as well as to check the system, it is necessary to remove the glove compartment insert.



The heating-water pump is mounted on the right-hand firewall in the engine compartment (see center picture).



The duo heating-water valve is in the equipment space (see bottom picture).



A20

Installation position of components
Mercedes-Benz W 124



A21

Installation position of components
Mercedes-Benz W 124



Exchanger sensors left/right

Both exchanger sensors for left-hand and right-hand heat exchanger sides are in the heater box (see top picture, arrows).

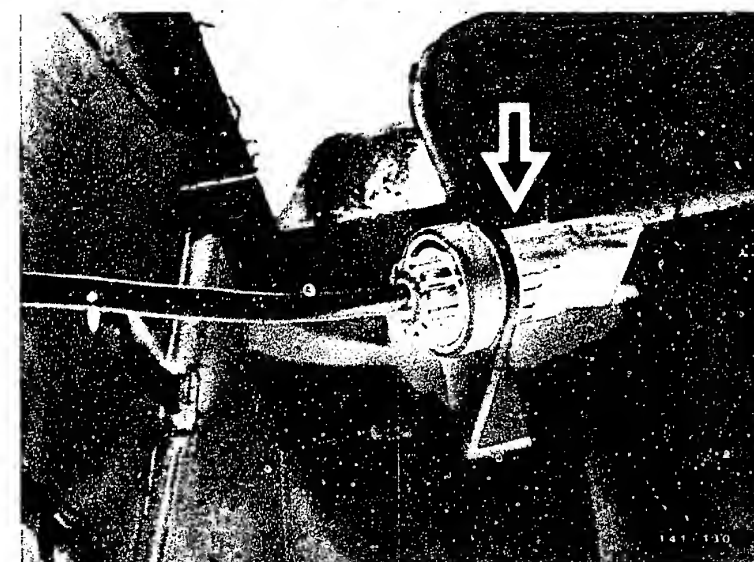
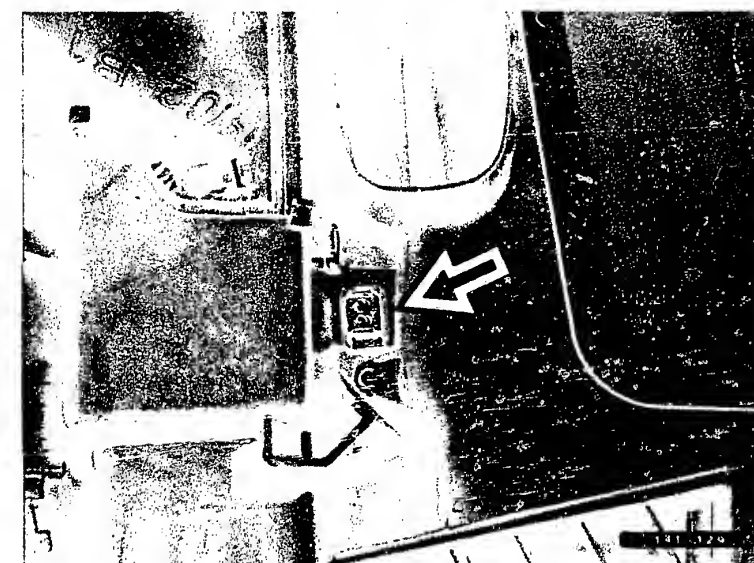
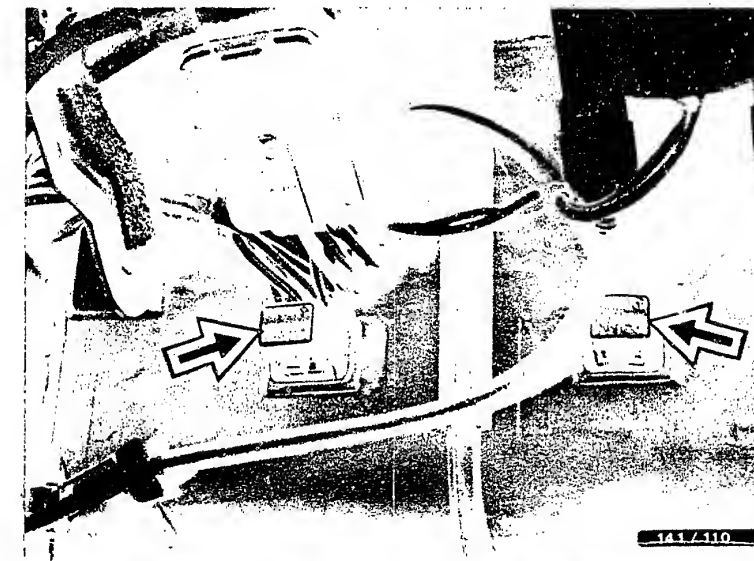
Note: Exchanger sensors are accessible only after removing the center console cover (ashtray, switches and radio must be removed).

Evaporator sensor

Like the exchanger sensors (see center picture, arrow) the evaporator sensor is inserted into the evaporator housing.

Outside-temperature sensor

The outside-temperature sensor is mounted on the blower housing (see bottom picture, arrow).



A22

Installation position of components
Mercedes-Benz W 124



A23

Installation position of components
Mercedes-Benz W 124



7. Trouble-shooting according to test steps

7.1 Preconditions

- Check customer complaints
(check operation of automatic heating and air conditioning system in accordance with vehicle owner manual).
- Coolant level O.K.
- Refrigerant level O.K.
- Engine running and at normal operating temperature
- Electrical system (fuses, battery voltage) O.K.
- Blower switch at position IIII or blower running at max. speed.
- Left-hand and right-hand temperature selector thumb-wheels approximately in center position (22)
- Air-distributor switch on vehicle at footwell position
- Fresh-air/recirculated-air switch at fresh-air position
- Air conditioning switch at position "a"

In the detailed trouble-shooting program starting on Coordinate B 2, go through the test steps one after the other.

Continue with the trouble-shooting section only if an incorrect reading is indicated.



7.2 Connecting the adapter lead

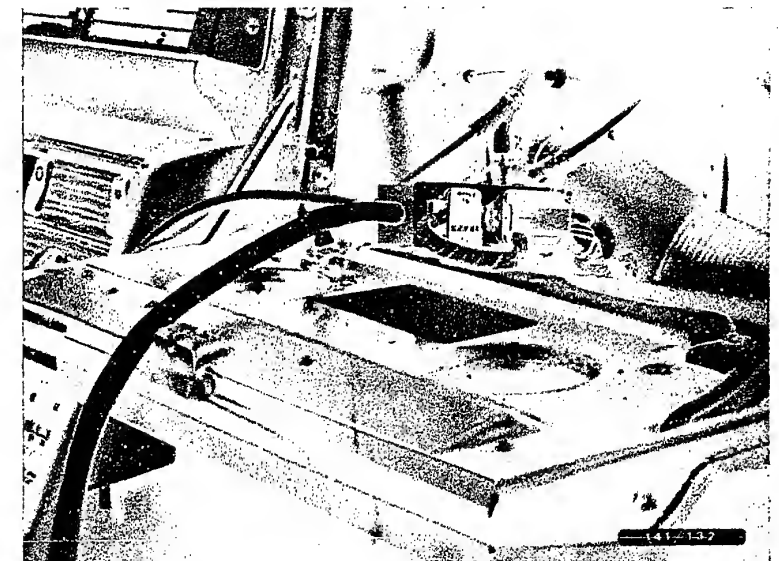
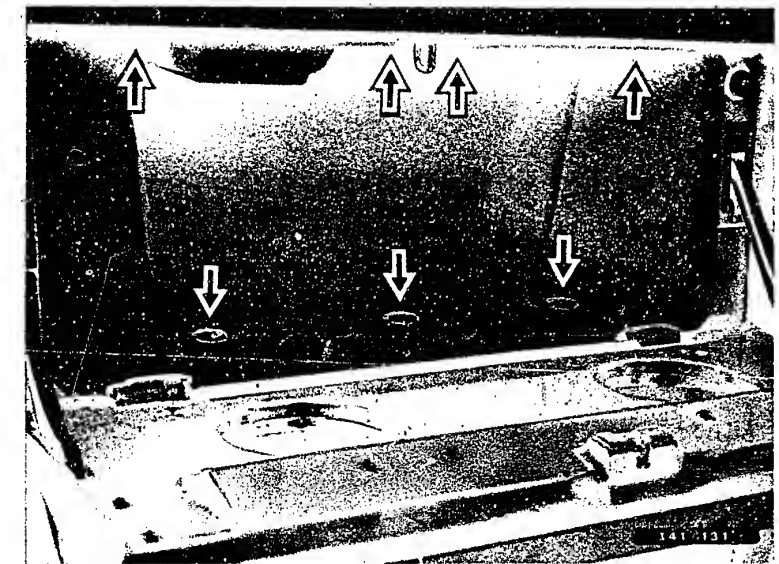
Switch off ignition. Take out glove compartment insert. To do this, unscrew locking bracket and unlatch fastening pins (see top picture, arrows). Unhook glove compartment lighting.

Disconnect both control-unit plugs from electronic control unit and connect to test adapter KDHK 0001 using adapter lead KDHK 0008 (see bottom picture). Start engine.

Note:

Carry out trouble-shooting with the aid of the test chart.

If the connection between control-unit plug and adapter lead or adapter lead and test adapter has to be disconnected, always beforehand set the rotary switch on the test adapter to "0" and switch off the ignition.



B2

Trouble-shooting

Mercedes-Benz W 124



B3

Trouble-shooting

Mercedes-Benz W 124



Test step 1:

Operation

Rotary switch position
(S1): 1

Measuring equipment:

Test adapter KDHK 0001

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Reading on test adapter:

10 ... 15

Testing of:

Electronic control unit power
supply

Test specification obtained?

no

Malfunction:

Reading < 10 or > 15

Trouble-shooting:

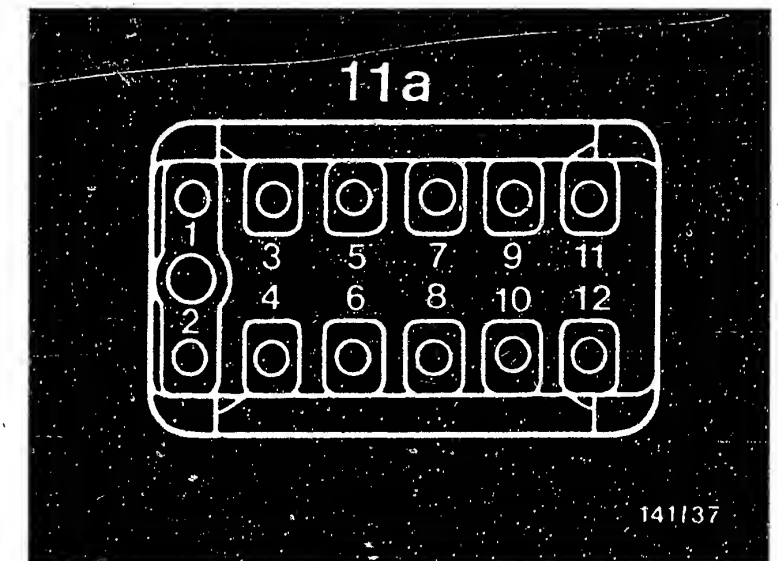
Using voltmeter, check at control-unit plug (11a)
socket 9 to socket 6:

Reading should be approx. V_B
(Ignition on).

Check fuses.

Eliminate open circuits/contact resistances at
leads and plug-in connections.

If reading > 15, alternator regulator is
defective.



11a=Control-unit plug

yes

Continued on next picture
page

B4

Trouble-shooting

Mercedes-Benz W 124



B5

Trouble-shooting

Mercedes-Benz W 124



Test step 2:

Operation:

Rotary switch position
(S1): 2

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Additional operation:

Auxiliary switch on adapter
lead to position "I"

Reading on test adapter:

5 ... 11

Testing of:

Resistance of passenger-compartment
temperature sensor

Test specification obtained?

yes

Continued on next picture
page

no

Malfunction:

Reading approx. 0 or approx. 15

Trouble-shooting with multimeter:

Switch off ignition.

Using ohmmeter, check the following leads for
continuity:

- from control-unit plug (11a) socket 10 to
socket of temperature sensor plug
- from control-unit plug (11a) socket 11 to
plug of passenger-compartment temperature
sensor

Reading should be approx. 0 Ω

- on control-unit plug (11a) check socket 10 to
socket 11 for short circuit

Reading should be $\infty\Omega$

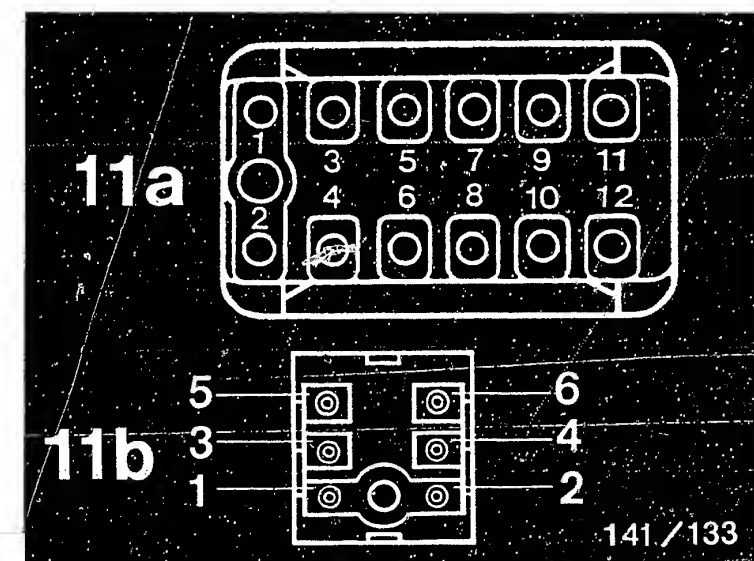
(Temperature sensor plug disconnected).

Eliminate contact resistance/open circuits on
leads.

Check resistance of passenger-compartment
temperature sensor between pins of temperature
sensor.

Reading should be approx. 8 ... 16 k Ω
at approx. +15°...+30°C at temperature
sensor

Replace passenger-compartment temperature sensor.

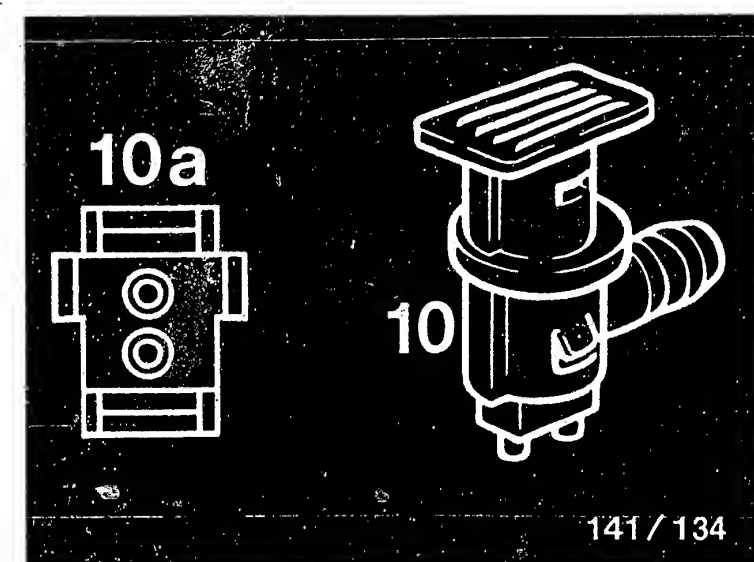


11a=Control-unit plug 12-pin

11b=Control-unit plug 6-pin

10 =Passenger-compartment tempera-
ture sensor

10a=Plug of passenger-compartment
temperature sensor



Test step 2.1

Operation:

Rotary switch position
(S1): 2

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Additional operation:

Spray refrigerant spray into
sensor

Reading on test adapter:

Reading falling while cooling

Testing of:

Change of resistance of
passenger-compartment temper-
ature sensor.

Reading falling while
cooling?

no

Malfunction:

Reading not falling while cooling.

Trouble-shooting with multimeter:

Switch off ignition.

Check resistance of passenger-compartment tempera-
ture sensor between pins.

Reading should be approx. 8 ... 16 k Ω
at approx. +15°...+30°C at temperature
sensor.

Spray passenger-compartment temperature sensor
with refrigerant spray; resistance must increase;
if so, passenger-compartment temperature sensor
is O.K.

Using ohmmeter, check the following leads for
short circuit/open circuit:

- at control-unit plug (11a) socket 10 to
socket 11

Reading should be $\infty\Omega$

(Temperature sensor plug disconnected).

- from control-unit plug (11a) socket 10 to
plug of temperature sensor
- from contro-unit plug (11a) socket 11 to
plug of temperature sensor

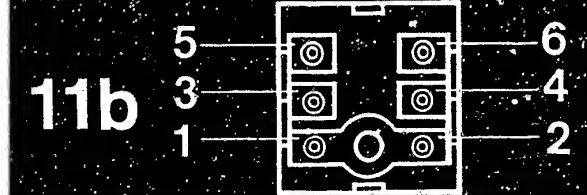
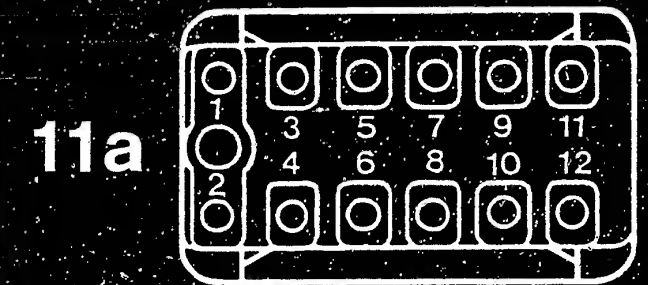
Reading should be: approx. 0 Ω in each case

Eliminate contact resistances/open circuits at
leads.

Replace temperature sensor

yes

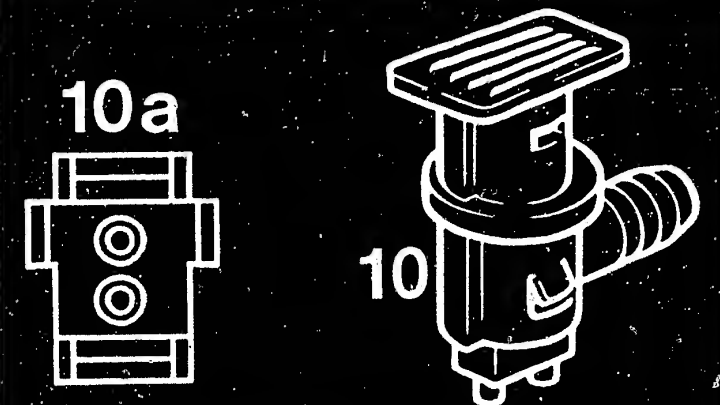
Continued on next
picture page.



141/133

11a=Control-unit plug 12-pin
11b=Control-unit plug 6-pin

10 =Passenger-compartment tempera-
ture sensor
10a=Plug of passenger-compartment
temperature sensor



141/134



Test step: 2.2

Operation:

Rotary switch position
(S1): 2

Measuring equipment:

Paper strip or similar

Operation in vehicle:

Engine running; blower switch
at position IIII

Additional operation:

Hold paper strip in front of
air-admission opening.

Reading:

Paper strip pulled onto air-
admission opening.

Testing of:

Air intake through air-ad-
mission opening of passenger-
compartment sensor

Paper strip being pulled in?

no

Malfunction:

No intake of air detectable

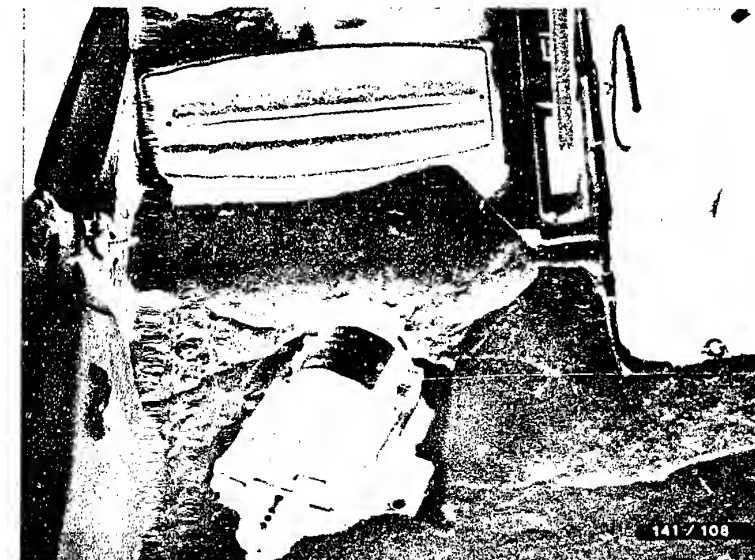
Trouble-shooting:

Check hose between passenger-compartment tempera-
ture sensor housing and air-admission blower for
leaks and security.

Using voltmeter, check at plug of air-admission
blower term. 1 to term. 2 (ignition on)

Reading should be approx. V_B

Eliminate contact resistances/open circuit on
leads. If reading V_B and auxiliary blower not
running, replace auxiliary blower.



yes

Continued on next
picture page

B 10

Trouble-shooting

Mercedes-Benz W 124



B 11

Trouble-shooting

Mercedes-Benz W 124



Test step: 2.3

Operation:

Rotary switch position
(S1): 2

Measuring equipment:

Test adapter KDHK 0001

Operation in vehicle:

Engine running

Additional operation:

Auxiliary switch on adapter
lead to position "A"

Reading on test adapter:

9 ... 12 at
approx. 10 ... 30°C at
temperature sensor

Testing of:

Resistance of outside-
temperature sensor

Test specification within
stated tolerance?

yes

Continued on next
picture page.

no

Malfunction:

Test specification not within tolerance

Trouble-shooting:

Switch off ignition.

Using ohmmeter, check:

- from control-unit plug (11b) term. 5
to control-unit plug (11a) term. 11.

Reading should be 5.0 ... 1.9 k Ω at
approx. + 10 ... +30°C at
temperature sensor.

- from control-unit plug 11a term. 11 to
plug of temperature sensor
- from control-unit plug (11b) term. 5 to
plug of temperature sensor
check leads for continuity:

Reading should be approx. 0 Ω

- from control-unit plug (11a) term. 11
to control-unit plug (11b) term. 5
check lead for short circuit:

Reading should be $\infty\Omega$

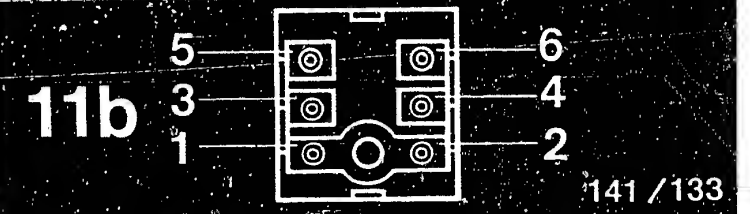
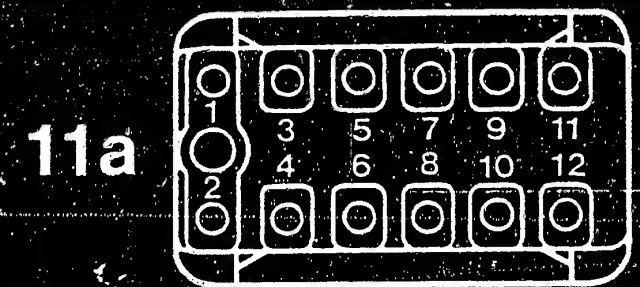
(temperature sensor plug disconnected).

- Check resistance of outside-temperature
sensor directly between pins of temperature
sensor:

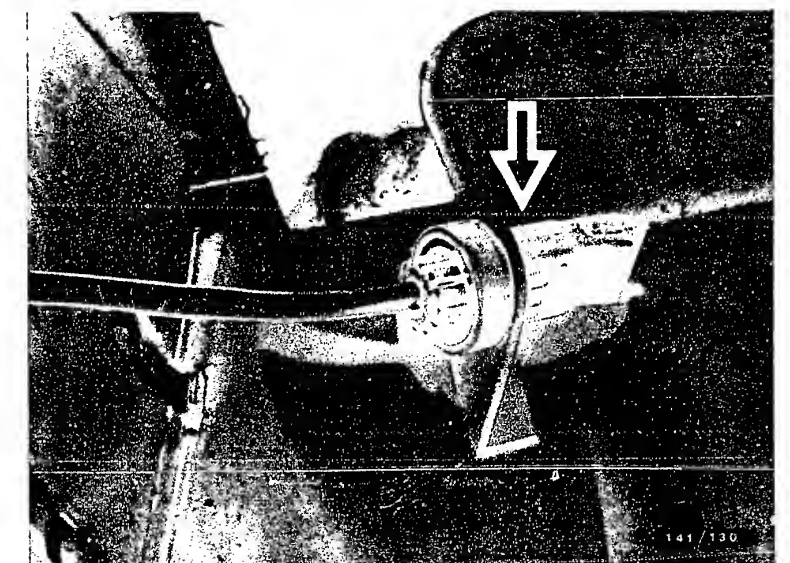
Reading should be 5.0 ... 1.9 k Ω at
approx. +10 ... +30°C at
temperature sensor

Corrective action:

Eliminate contact resistances/open circuits on
leads.
Replace outside-temperature sensor.



11a=Control-unit plug 12-pin
11b=Control-unit plug 6-pin



Test step: 3

Operation:

Rotary switch position
(S1): 3

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Additional operation:

Turn left-hand temperature
selector thumbwheel from min.
to max.

Note: After testing, return
temperature selector thumbwheel
to center position (22).

Reading on test adapter:

approx. 2.5 ... 6.5

"Min. latched" position approx. 0

"Max. latched" position approx.
12

Reading must change uniformly
between "before min. latched"
position and "before max.
latched" position.

Testing of:

Left-hand temperature selector
thumbwheel

Test specifications obtained?

yes

Continued on next
picture page

no

Malfunction:

Reading jumps or no reading.

Trouble-shooting:

If reading jumps between "min." and "max."
latched positions = temperature selector thumb-
wheel defective.

Replace control panel.

If no reading, check the following leads with ohm-
meter for short circuit/open circuit.

- from control-unit plug (11a) socket 7 to plug
of control panel socket 10 (see bottom picture)
- from control-unit plug (11a) socket 2 to plug
of control panel socket 1
- from control-unit plug (11a) socket 11 to plug
of control panel socket 11

Reading should be approx. 0 Ω

Eliminate contact resistances/open circuits.

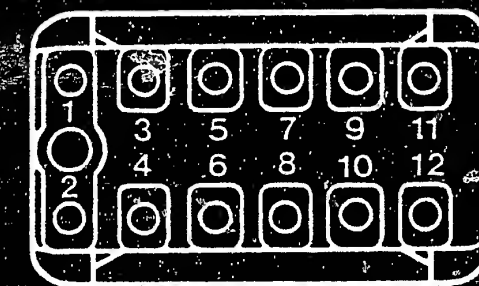
- at control-unit plug (11a) check socket 7 to
socket 11 and socket 2 to socket 11 (plug of
control panel disconnected).

Reading should be $\infty\Omega$

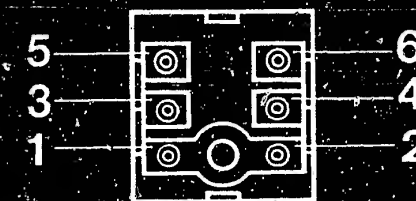
Eliminate short circuit.

If no fault is detectable on the leads, try
replacing the control panel.

11a



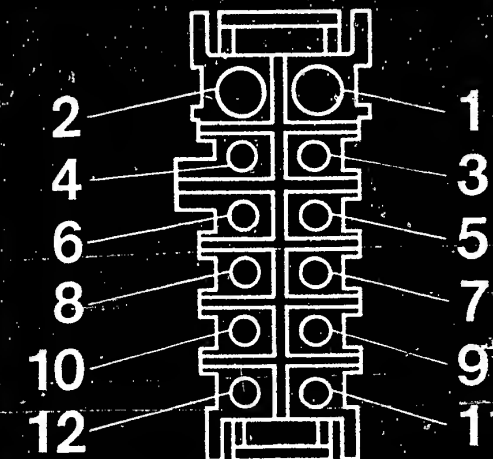
11b



141/133

11a=Control-unit plug 12-pin

11b=Control-unit plug 6-pin



141/114

B 14

Trouble-shooting

Mercedes-Benz W 124



B 15

Trouble-shooting

Mercedes-Benz W 124



Test step 4:

Operation:

Rotary switch position (S1): 4

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Additional operation:

Turn left-hand temperature selector thumbwheel from min. to max.

Note: After testing, return temperature selector thumbwheel to center position (22).

Reading on test adapter:

approx. 2.5...6.5

"Min. latched" position approx. 0

"Max. latched" position approx. 12

Reading must change uniformly between "before min. latched" position and "before max. latched" position.

Testing of:

Right-hand temperature selector thumbwheel

Test specifications obtained?

yes

Continued on next picture page

no

Malfunction:

Reading jumps or no reading.

Trouble-shooting:

If reading jumps between "min." and "max." latched positions = temperature selector thumbwheel defective.

Replace control panel.

If no reading, check the following leads with ohmmeter for short circuit/open circuit.

- from control-unit plug (11a) socket 7 to plug of control panel socket 10 (see bottom picture)
- from control-unit plug (11a) socket 3 to plug of control panel socket 2
- from control-unit plug (11a) socket 11 to plug of control panel socket 11

Reading should be approx. 0 Ω

Eliminate contact resistances/open circuits.

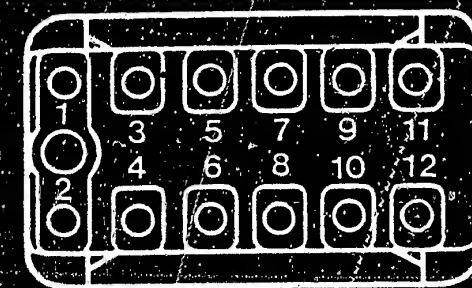
- at control-unit plug (11a) check socket 7 to socket 11 and socket 3 to socket 11 (plug of control panel disconnected).

Reading should be $\infty \Omega$

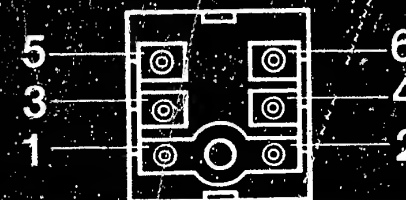
Eliminate short circuit.

If no fault is detectable on the leads, try replacing the control panel.

11a

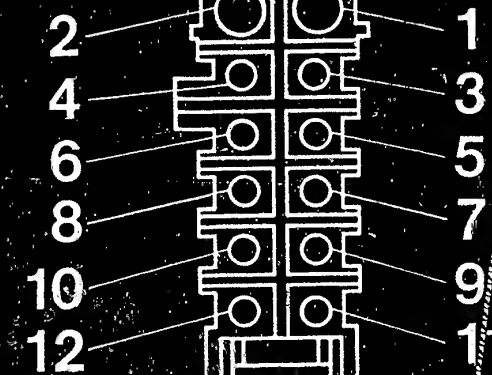


11b



141/133

11a=Control-unit plug 12-pin
11b=Control-unit plug 6-pin



141/114



Test Step: 5

Operation:

Rotary switch position
(S1): 5

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Reading on test adapter:

5 ... 12

Testing of:

Resistance of evaporator
temperature sensor

Test specification within
stated tolerance?

no

Malfunction:

Test specification not within tolerance.

Trouble-shooting:

Using ohmmeter, check the following leads.

- from control-unit plug (11a) term. 11 to
control-unit plug (11b) term. 2

Reading should be approx. 20 ... 6.5 k Ω at
approx. +10...+35°C at
temperature sensor

- Check leads for open circuit
- from control-unit plug (11a) term. 11 and
from control-unit plug (11b) term. 2 to plug
of evaporator temperature sensor. Check leads
for open circuit.

Reading should be approx. 0 Ω

Check leads for short circuit:

- from control-unit plug (11a) term. 11 to
control-unit plug (11b) term. 2

Reading should be approx. $\infty\Omega$
(temperature sensor plug disconnected).

Check resistance directly between pins of
evaporator temperature sensor:

Reading should be approx. 20...6.5 k Ω at
approx. +10°...+35°C at
temperature sensor.

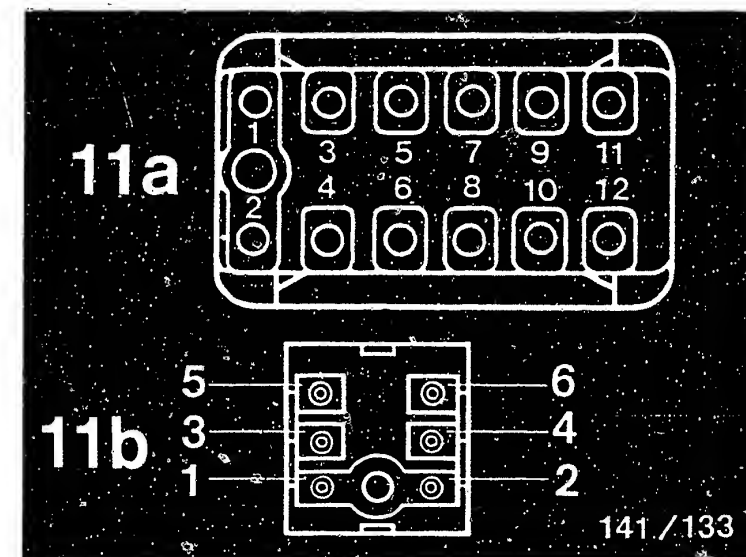
Corrective action:

Eliminate contact resistances/short circuits/
open circuits at leads.

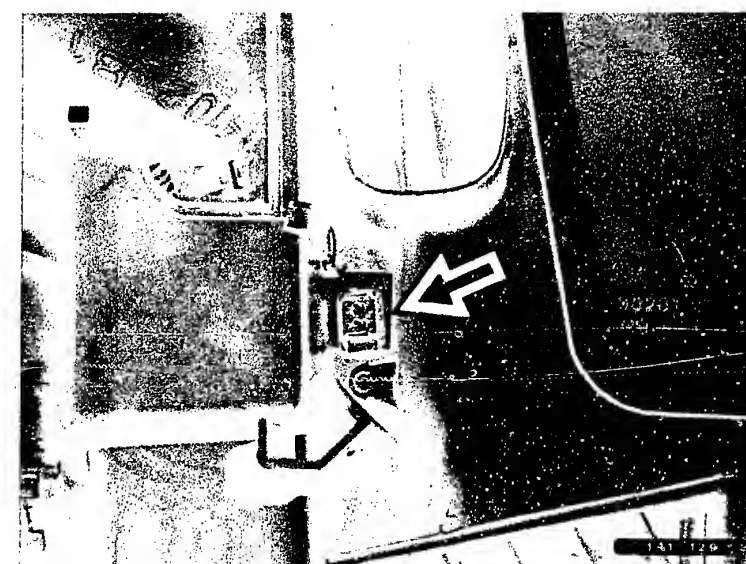
Replace evaporator temperature sensor.

yes

Continued on next
picture page



11a=Control-unit plug 12-pin
11b=Control-unit plug 6-pin



Test step: 6

Operation:

Rotary switch position
(S1): 6

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Switch off engine. Switch on
ignition. Blower switch to
position I

Additional operation:

Press auxiliary switch (S) on
test adapter

Reading on test adapter:

0 ... 3

By feeling/listening, check that
heating-water pump is running.

Testing of:

Operation of heating-water
pump

Test specification within
tolerance?

Heating-water pump running?

yes

Continued on next
picture page

no

Malfunction:

Heating-water pump not running.

Trouble-shooting with multimeter:

Using voltmeter, check at plug of heating-water
pump socket a to ground (ignition on)

Reading should be approx. V_B

Switch off ignition. Using ohmmeter, check lead
from control-unit plug (11a) socket 4 to plug of
heating-water pump socket b.

Reading should be approx. 0Ω

Using ohmmeter, check at control-unit plug (11a)
socket 9 to socket 4.

Reading should be $\infty \Omega$

(Plug of heating-water pump disconnected).

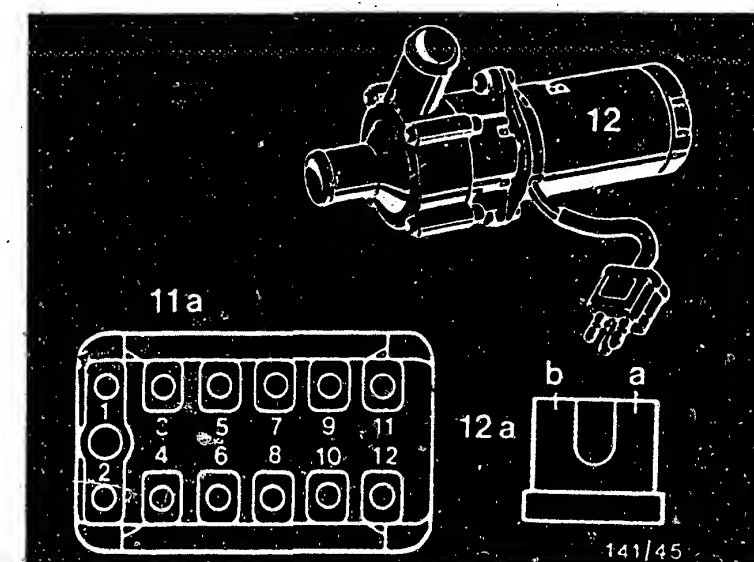
Corrective action:

Eliminate contact resistances/open circuits on
leads.

Replace heating-water pump.



11a=Control-unit plug
12 =Heating-water pump
12a=Plug to heating-water pump



B20

Trouble-shooting

Mercedes-Benz W 124



B21

Trouble-shooting

Mercedes-Benz W 124



Test step: 6.1

Operation:

Rotary switch position
(S1): 6

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Ignition on
Blower switch to position I

Additional operation:

Press auxiliary switch (S) on
test adapter again (unlatch)

Reading on test adapter:

9 ... 14

By feeling/listening, check
that heating-water pump is
not running.

Testing of:

Operation of heating-water
pump

Test specification within
tolerance?

Heating-water pump not
running?

no

Malfunction:

Heating-water pump running.

Trouble-shooting with multimeter:

Switch off ignition.

Disconnect plug from heating-water pump.

Using ohmmeter, check from control-unit plug
(11a) socket 4 to ground.

Reading should be $\infty\Omega$

Using voltmeter, check at plug of heating-water
pump socket a to ground:

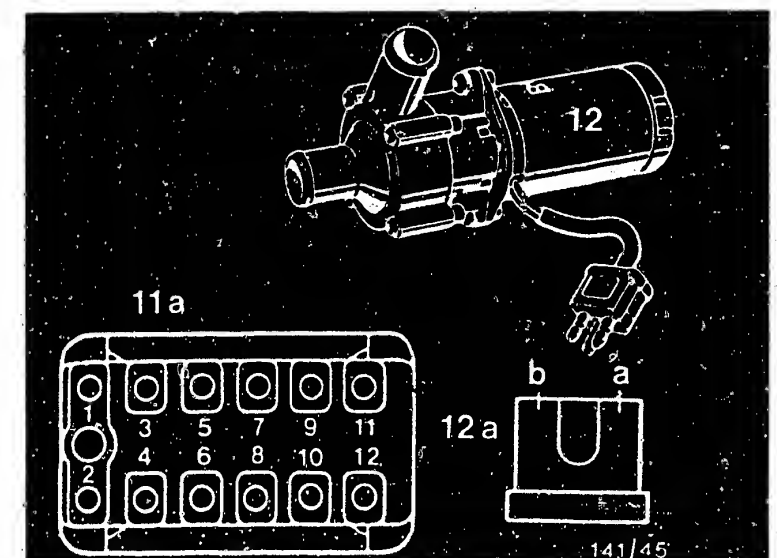
Reading should be approx. V_B

Corrective action:

Eliminate contact resistances/open circuits/
short circuits at leads.



11a=Control-unit plug
12 =Heating-water pump
12a=Plug to heating-water pump



yes

Continued on next
picture page

B22

Trouble-shooting

Mercedes-Benz W 124



B23

Trouble-shooting

Mercedes-Benz W 124



Test step: 7

Operation:
Rotary switch position (S1): 7

Measuring equipment:
Test adapter

Measuring range:
0 ... 15

Operation in vehicle:
Engine running
Blower switch to position IIII

Additional operation:
Press auxiliary switch "S" on test adapter.

Reading on test adapter:
0 ... 3

By feeling, check that there is no heating effect on the left.

Testing of:
Operation of left-hand heating-water valve

Test specification within tolerance?
No heating effect on left?

no →

yes ↓

Continued on next picture page

Malfunction:
Heating effect present despite auxiliary switch "S" having been pressed.

Trouble-shooting with multimeter:
Switch off ignition.
Using ohmmeter, check the following leads for short circuit and open circuit:

- from control-unit plug (11a) socket 12 to plug of heating-water valve socket 1

Reading should be approx. 0Ω

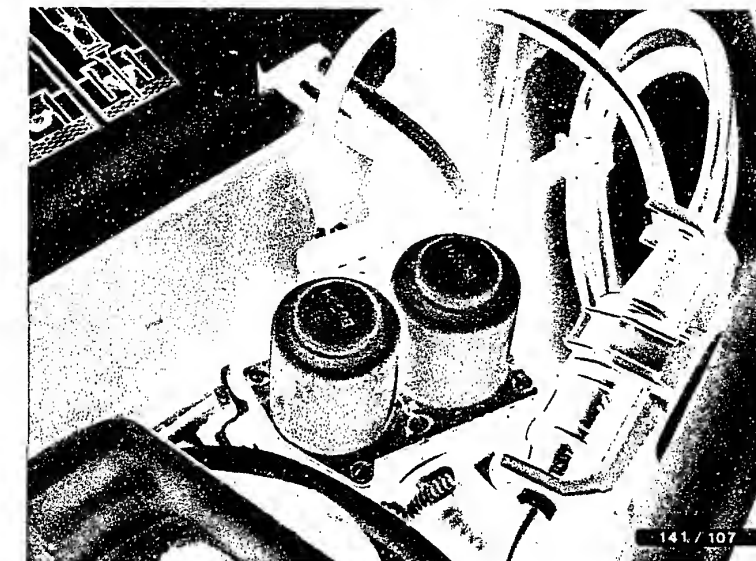
- on control-unit plug (11a) socket 12 to socket 9 (plug of heating-water valve disconnected).

Reading should be approx. $\infty \Omega$

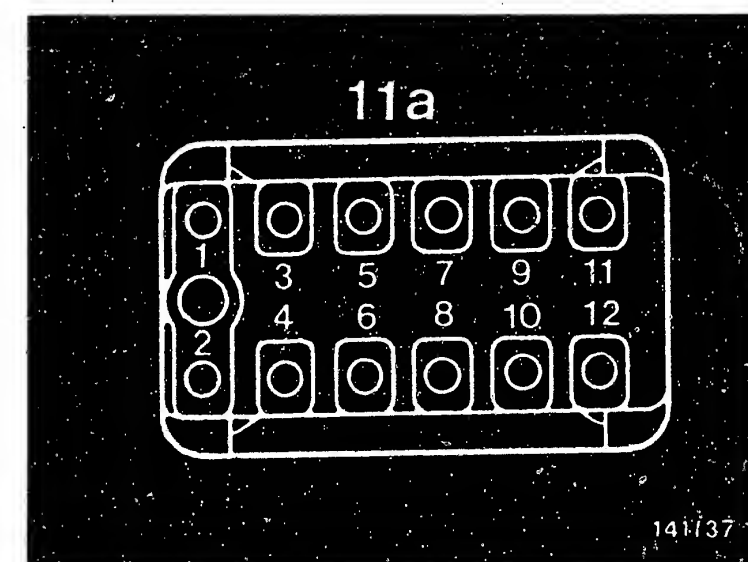
Using voltmeter, check at plug of heating-water valve socket 2 to ground (ignition on).

Reading should be approx. V_B

If leads are O.K., battery voltage present and still there is a heating effect, heating-water valve is mechanically defective - replace.



11a=Control-unit plug



Test step: 7.1

Operation:

Rotary switch position
(S1): 7

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running
Blower switch at position
IIII

Additional operation:

Press auxiliary switch "S"
on test adapter again
(unlatch)

Reading on test adapter:

9 ... 14

By feeling, check that there
is a heating effect on the
left.

Testing of:

Operation of left-hand
heating-water valve (open
when deenergized).

Test specification within
tolerance?

Heating effect on left?

no

Malfunction:

No heating effect despite reading approx.
9...14

Trouble-shooting:

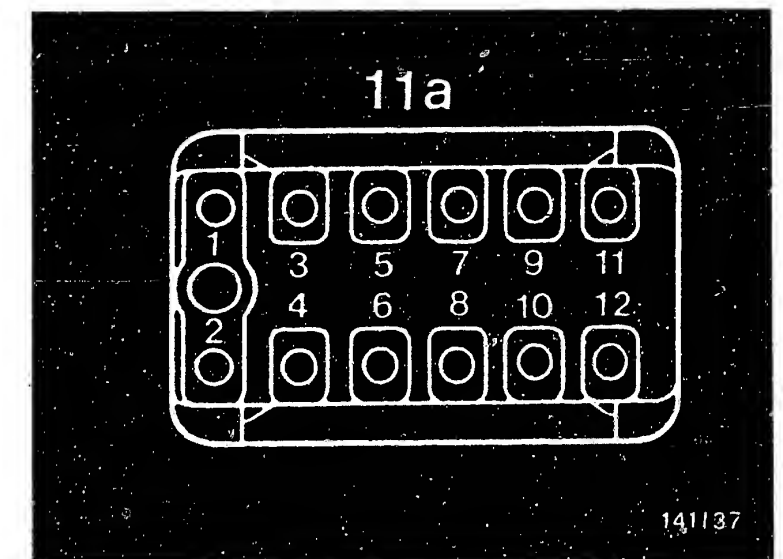
Heating-water valve electrically O.K. but
mechanically defective - replace.

Note:

If system heats only at low engine speed, replace
heating-water valve.



11a=Control-unit plug



141137

yes

Continued on next
picture page

C3

Trouble-shooting

Mercedes-Benz W 124



C4

Trouble-shooting

Mercedes-Benz W 124



Test step: 8

Must come directly after test step 7.1.

Operation:

Rotary switch position (S1): 8

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Blower switch at position IIII

Reading on test adapter:

7 ... 12

slowly falling

Testing of:

Resistance of left-hand ex-changer sensor.

Test specification within tolerance?

Reading slowly falling?

no

Malfunction:

Reading approx. 0 or approx. 15, not slowly falling

Trouble-shooting with multimeter:

Ignition off.

Using ohmmeter, check the following leads for short circuit and open circuit:

- from control-unit plug (11a) socket 1 to temperature-sensor plug.
- from control-unit plug (11a) socket 11 to temperature sensor plug

Reading should be approx. 0 Ω

- at control-unit plug (11a) socket 1 to socket 11 (temperature sensor plug disconnected).

Reading should be $\infty \Omega$

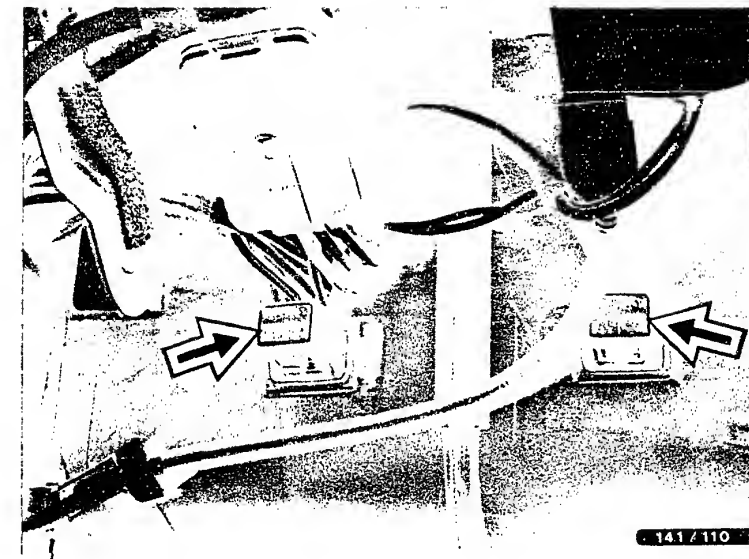
Check resistance directly at pins of exchanger sensor:

Reading should be approx. 8... 16 k Ω
at approx. +15...+30°C at exchanger sensor.

Spray exchanger sensor with refrigerant spray. Resistance must rise.

Note:

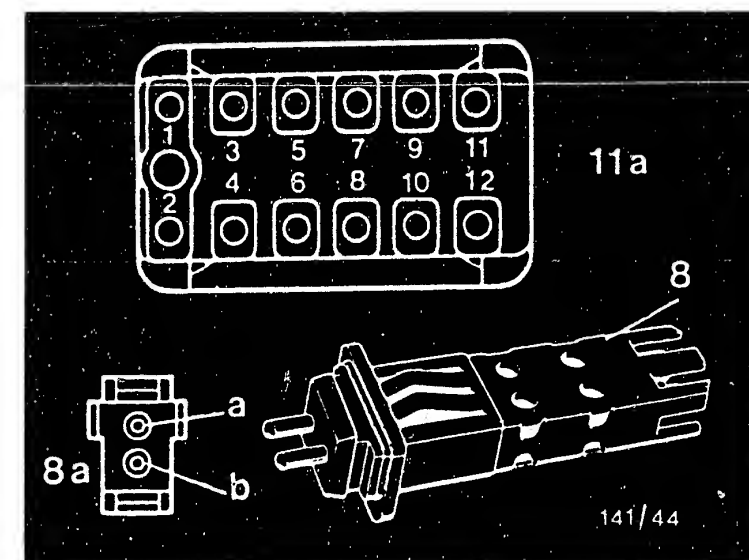
If reading does not "fall slowly", the heating water in the heat exchanger may already have cooled down too much. If so, return rotary switch (S1) on test adapter to position 7 for at least 15 sec. (auxiliary switch (S) unlatched). Then continue with test step 8.



8 =Temperature sensor on heat exchanger

8a =Plug for temperature sensor on heat exchanger

11a=Control-unit plug



yes

Continued on next picture page

C5

Trouble-shooting

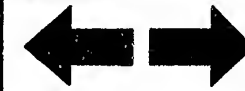
Mercedes-Benz W 124



C6

Trouble-shooting

Mercedes-Benz W 124



Test step: 9

Operation:

Rotary switch position
(S1): 9

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running
Blower switch to position IIII

Additional operation:

Press auxiliary switch "S" on
test adapter.

Reading on test adapter:

0 ... 3

By feeling, check that there
is no heating effect on the
right.

Testing of:

Operation of right-hand
heating-water valve

Test specification within
tolerance?

No heating effect on right?

yes

Continued on next
picture page

no

Malfunction:

Heating effect present despite auxiliary
switch "S" having been pressed.

Trouble-shooting with multimeter:

Switch off ignition.

Using ohmmeter, check the following leads for
short circuit and open circuit:

- from control-unit plug (11a) socket 5 to
plug of heating water valve socket 3

Reading should be approx. 0Ω

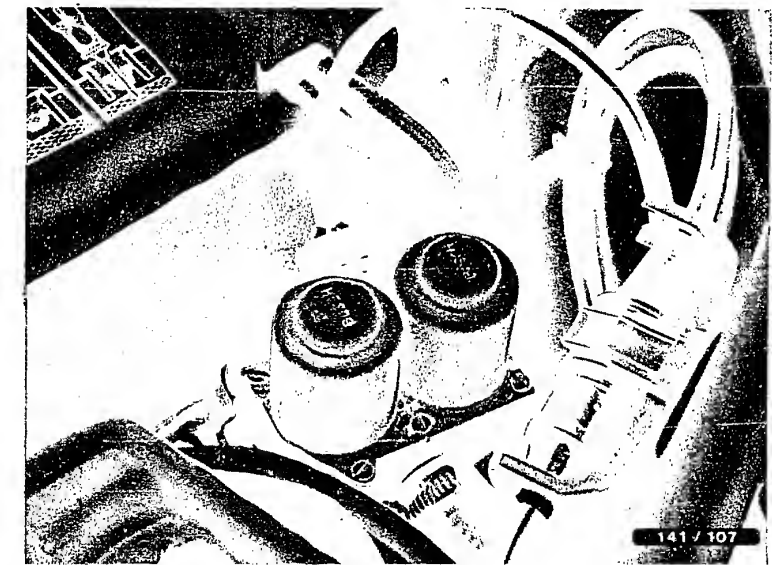
- on control-unit plug (11a) socket 5 to
socket 9 (plug of heating-water valve
disconnected).

Reading should be approx. $\infty \Omega$

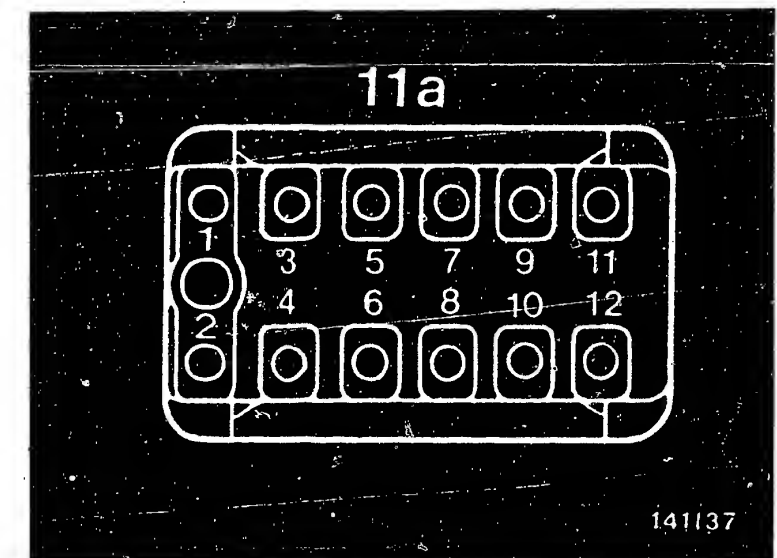
Using voltmeter, check at plug of heating-water
valve socket 2 to ground (ignition on).

Reading should be approx. V_B

If leads are O.K., battery voltage present
and still there is a heating effect, heating-
water valve is mechanically defective - replace.



11a=Control-unit plug.



C7

Trouble-shooting

Mercedes-Benz W 124



C8

Trouble-shooting

Mercedes-Benz W 124



Test step: 9.1

Operation:

Rotary switch position
(S1): 9

Measuring equipment:
Test adapter

Measuring range:
0 ... 15

Operation in vehicle:
Engine running
Blower switch at position
IIII

Additional operation:
Press auxiliary switch "S"
on test adapter again
(unlatch)

Reading on test adapter:
9 ... 14

By feeling, check that there
is a heating effect on the
right.

Testing of:
Operation of right-hand
heating-water valve (open
when deenergized).

Test specifications within
tolerance?
Heating effect on right?

no

Malfunction:

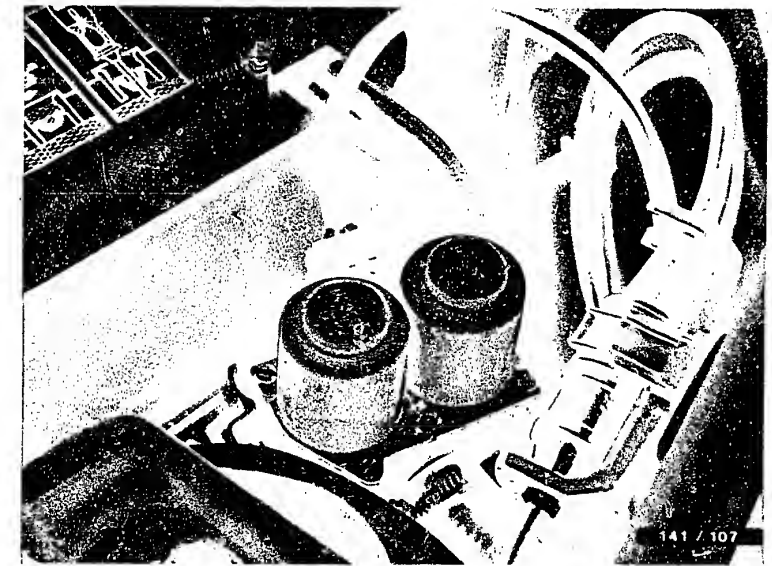
No heating effect despite reading approx.
9...14

Trouble-shooting:

Heating-water valve electrically O.K. but
mechanically defective - replace.

Note:

If system heats only at low engine speed, replace
heating-water valve.



yes

Continued on next
picture page

C9

Trouble-shooting
Mercedes-Benz W 124



C10

Trouble-shooting
Mercedes-Benz W 124



Test step: 10

Must come directly after test step 9.1.

Operation:

Rotary switch position (S1): 10

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Blower switch at position IIII

Reading on test adapter:

7 ... 12

slowly falling

Testing of:

Resistance of right-hand blow-in temperature sensor

Test specification within tolerance?

Reading slowly falling?

yes

Continued on next picture page

no

Malfunction:

Reading approx. 0 or approx. 15, not slowly falling

Trouble-shooting with multimeter:

Ignition off.

Using ohmmeter, check the following leads for short circuit and open circuit:

- from control-unit plug (11a) socket 8 to temperature-sensor plug
- from control-unit plug (11a) socket 11 to temperature-sensor plug

Reading should be approx. 0 Ω

- at control-unit plug (11a) socket 8 to socket 11 (temperature sensor plug disconnected).

Reading should be $\infty\Omega$

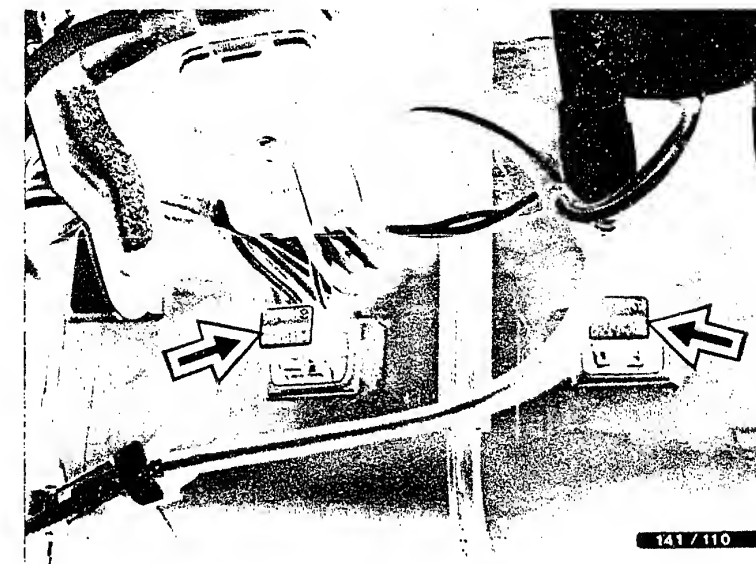
Check resistance directly at pins of blow-in temperature sensor.

Reading should be approx. 8 ... 16 k Ω
at approx. +15...+30°C at
blow-in temperature sensor.

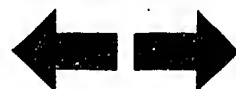
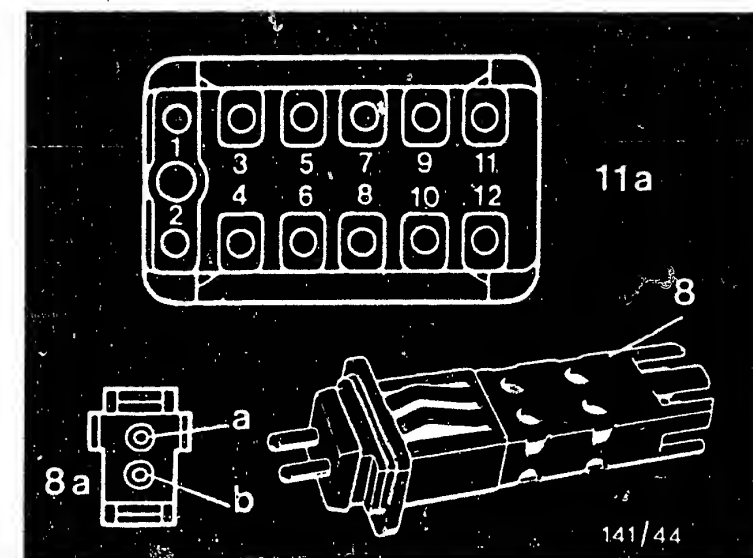
Spray blow-in temperature sensor with refrigerant spray. Resistance must rise.

Note:

If reading does not "fall slowly", the heating water in the heat exchanger may already have cooled down too much. If so, return rotary switch (S1) on test adapter to position 9 for at least 15 sec. (auxiliary switch (S) unlatched). Then continue with test step 10.



8 =Temperature sensor on heat exchanger
8a =Plug for temperature sensor on heat exchanger
11a=Control-unit plug



Test step 11:

Operation:

Rotary switch position (S1): 12

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Press button "a" on air conditioning switch (AC mode)
Engine running.
Blower switch to position IIII.

Additional operation:

Switch on auxiliary switch (S)
on test adapter.

Reading on test adapter:

0 ... 3

Refrigerant compressor must
switch on (wait approx. 10 sec
for system to adapt).

By feeling, check whether
supply air is greatly cooled.

Testing of:

Operation of refrigerant
compressor magnetic clutch
Test specification within
tolerance?

Refrigerant compressor
switching on?

no

Malfunction:

Test specification not within tolerance.
Refrigerant compressor not switching on.

Trouble-shooting:

Switch off ignition.
Check refrigerant level.

Follow safety instructions when working with
refrigerant.

Using ohmmeter, check the following leads:

- from control-unit plug (11b) term. 3 through
compressor cutoff pressure switch to plug-in
base of compressor cutoff control unit (see
bottom picture, arrow) socket 10

Reading should be approx. 0 Ω

- from plug-in base of compressor cutoff
control unit socket 7 to plug of compressor
clutch

Reading should be: 0 Ω

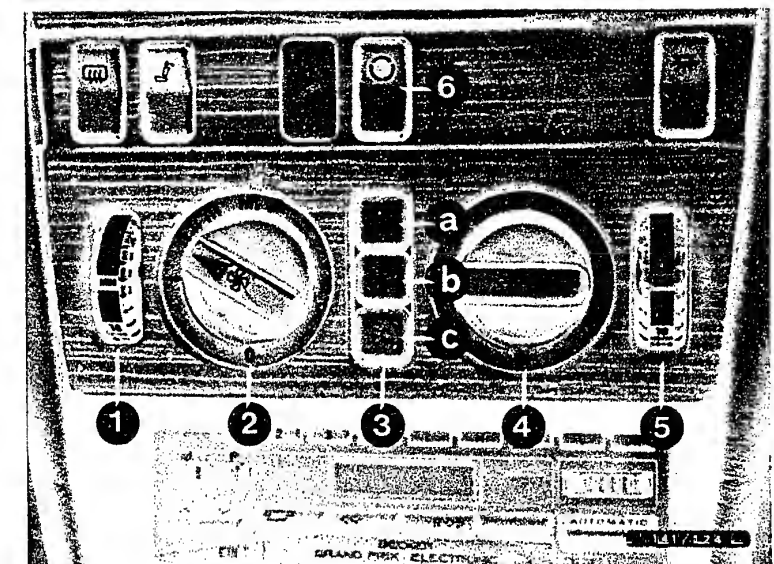
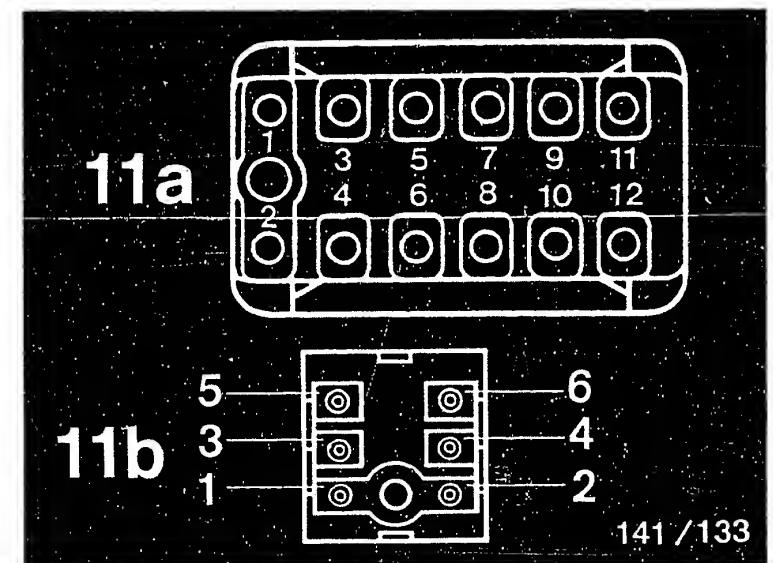
Corrective action:

Eliminate contact resistances/open circuits on
leads.

If no fault is detectable on the leads, try
replacing the compressor cutoff control unit
(see bottom picture, arrow).

yes

Continued on next
picture page



C13

Trouble-shooting

Mercedes-Benz W 124



C14

Trouble-shooting

Mercedes-Benz W 124



Test step: 11.1

Operation:

Rotary switch position
(S1): 12

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Press button "a" on air
conditioning switch (AC mode)

Engine running.

Blower switch to position II. III.

Additional operation:

Switch off auxiliary switch (S)
on test adapter.

Reading on test adapter:

10 ... 15

Refrigerant compressor must
switch off.

Testing of:

Operation of refrigerant
compressor magnetic clutch

Test specification within
tolerance?

yes

Continued on next
picture page

no

Malfunction:

Test specification not within tolerance.

Trouble-shooting:

Using ohmmeter, check the following leads:

- from control-unit plug (11b) term. 3 through
compressor cutoff pressure switch to plug-in
base of compressor cutoff control unit (see
bottom picture, arrow) socket 10

Reading should be approx. 0 Ω

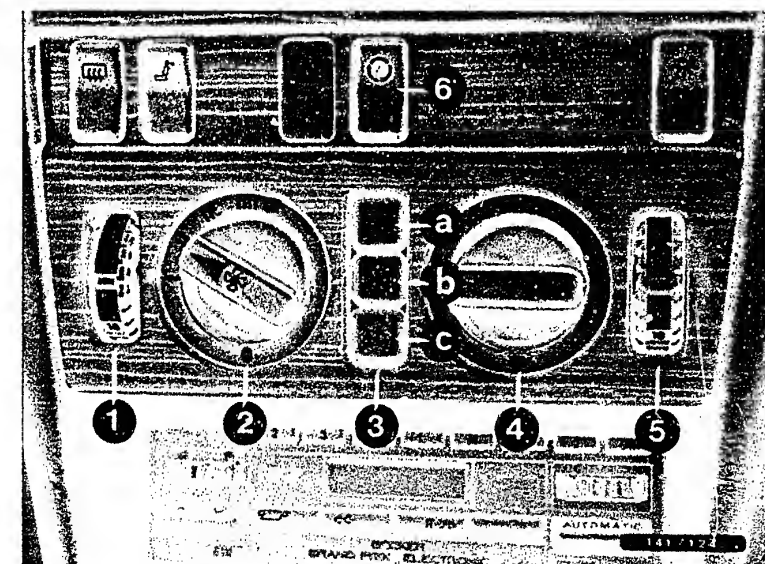
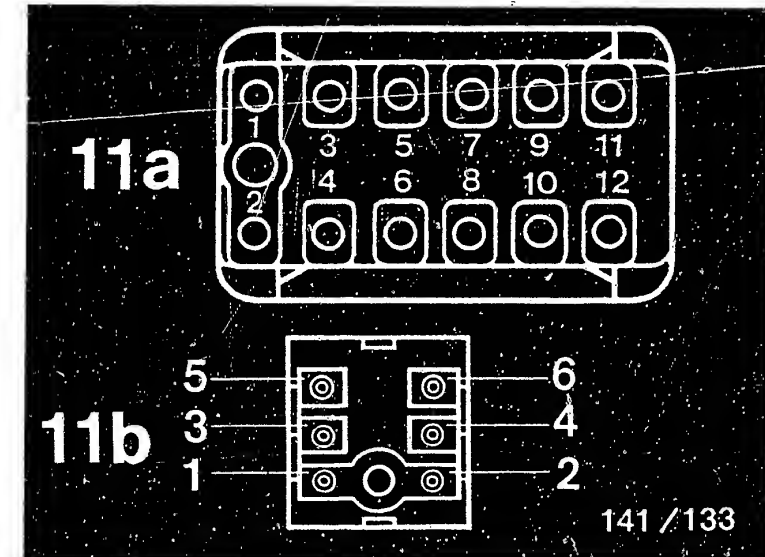
- from plug-in base of compressor cutoff
control unit socket 7 to plug of compressor
clutch

Reading should be: 0 Ω

Corrective action:

Eliminate contact resistances/open circuits on
leads.

If no fault is detectable on the leads, try
replacing the compressor cutoff control unit
(see bottom picture, arrow).



Test step: 12

Operation:

Rotary switch position
(S1): 13

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Air conditioning switch
in position "a" (AC mode)

Engine running

Reading on test adapter:

10 ... 15

Testing of:

Operation of air condition-
ing switch (not supplied by
Bosch).

Test specification within
tolerance?

no

Malfunction:

Reading less than 10

Trouble-shooting with multimeter:

Switch off ignition.

Using ohmmeter, check lead from control-unit
plug (11b) socket 4 to plug of control panel
socket 8.

Reading should be approx. 0 Ω

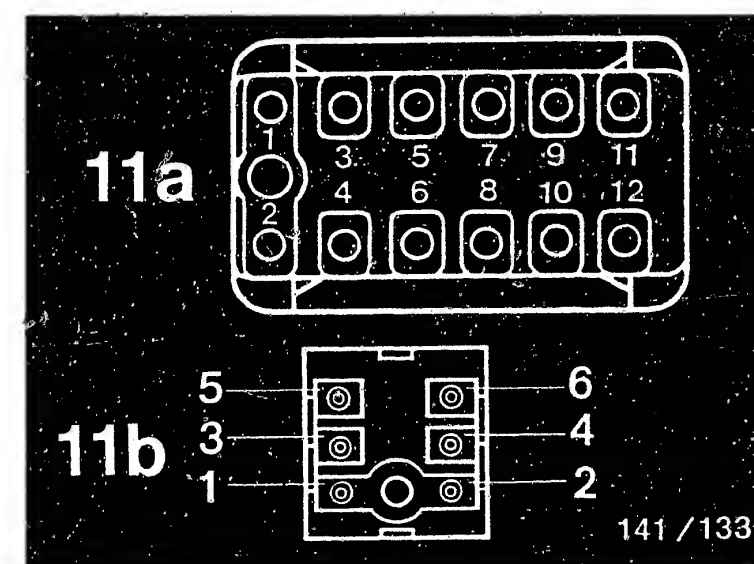
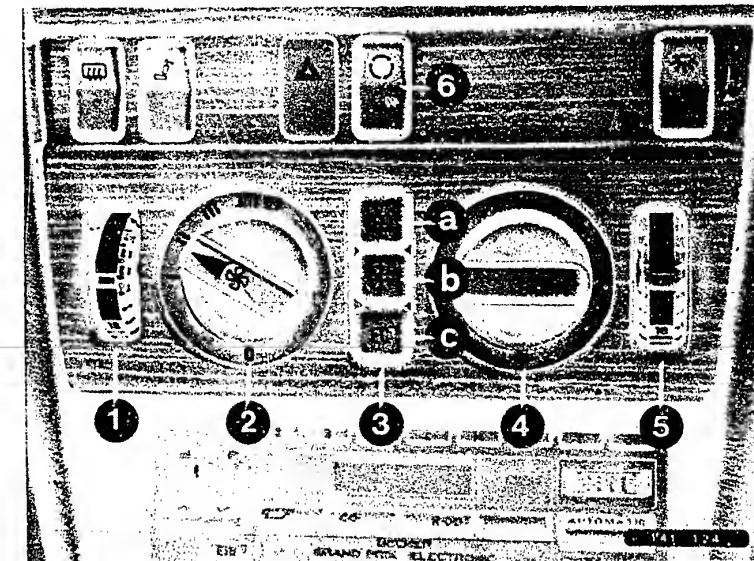
If lead O.K., try replacing air conditioning
switch.

Note:

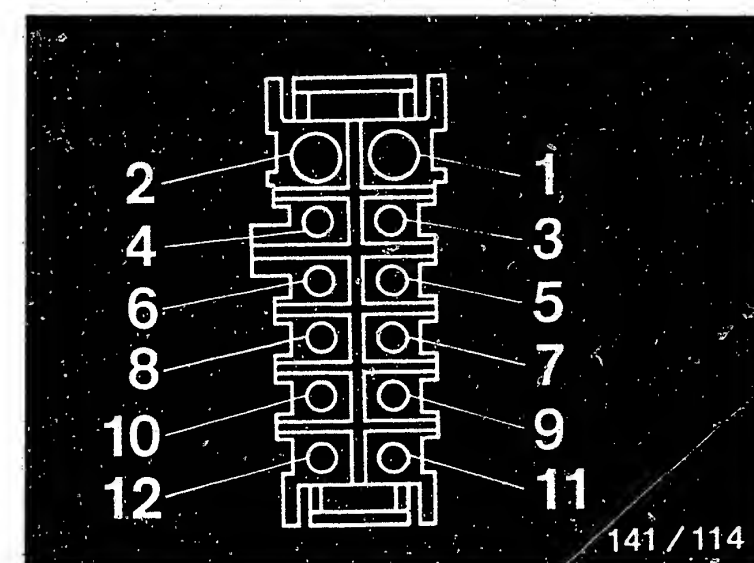
Air conditioning switch is not supplied by
Bosch.

yes

Continued on next
picture page



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C17

Trouble-shooting

Mercedes-Benz W 124



C18

Trouble-shooting

Mercedes-Benz W 124



Test step: 12.1

Operation:

Rotary switch position
(S1): 13

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Air conditioning switch
in position "c" (EC mode)
Engine running

Reading on test adapter:

0 ... 3

Testing of:

Operation of air condition-
ing switch (not supplied by
Bosch).

Test specification within
tolerance?

no

Malfunction:

Reading greater than 3

Trouble-shooting with multimeter:

Switch off ignition.

Using ohmmeter, check at control-unit plug (11b)
socket 4 to control-unit plug (11a) socket 9.

Reading should be $\infty\Omega$

(Plug of control panel disconnected).

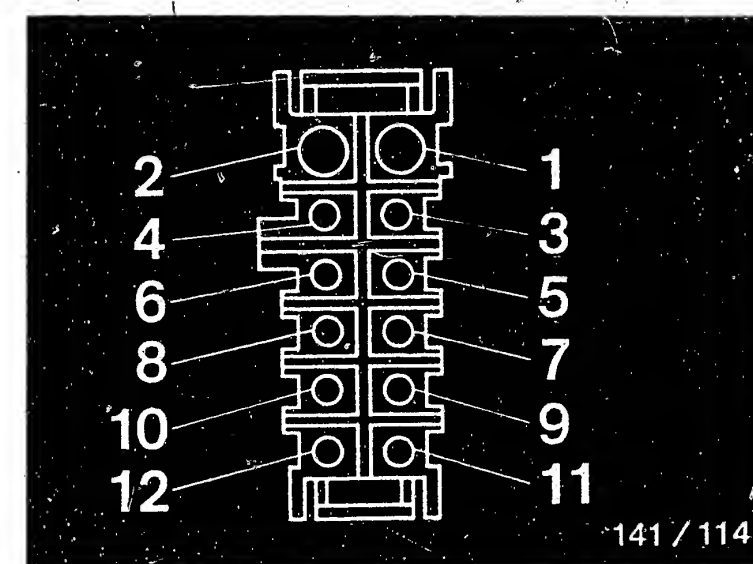
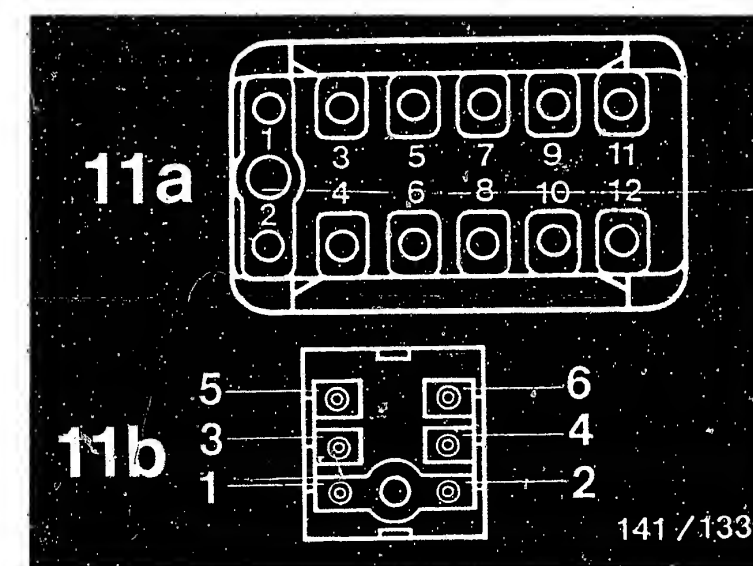
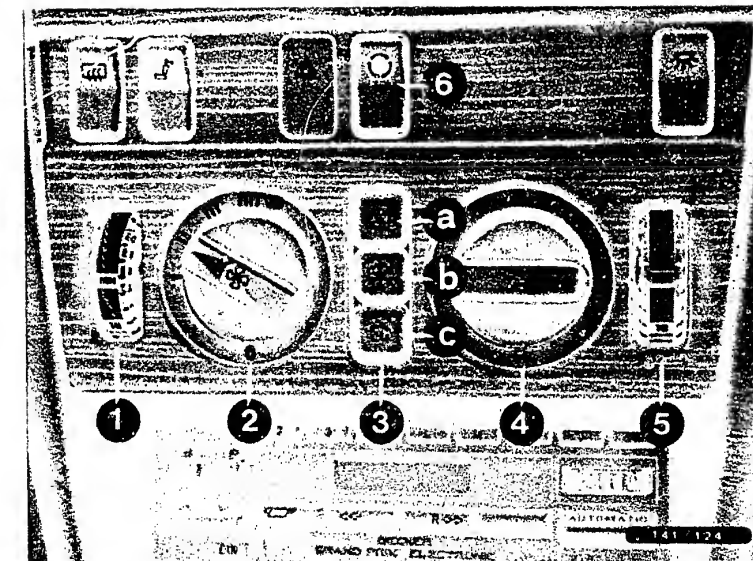
If leads O.K., try replacing air conditioning
switch.

Note:

Air conditioning switch is not supplied by Bosch.

yes

Continued on next
picture page



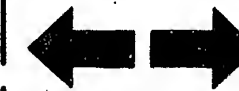
C19

Trouble-shooting
Mercedes-Benz W 124



C20

Trouble-shooting
Mercedes-Benz W 124



Test step: 12.2

Operation:

Rotary switch position
(S1): 13

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Air conditioning switch in
position "b" (DEF mode)
Engine running

Reading on test adapter:

0 ... 3

Testing of:

Operation of air condition-
ing switch (not supplied by
Bosch).

Test specification within
tolerance?

no

Malfunction:

Reading greater than 3

Trouble-shooting with multimeter:

Switch off ignition.

Using ohmmeter, check at control-unit plug (11b)
socket 4 to control-unit plug (11a) socket 9.

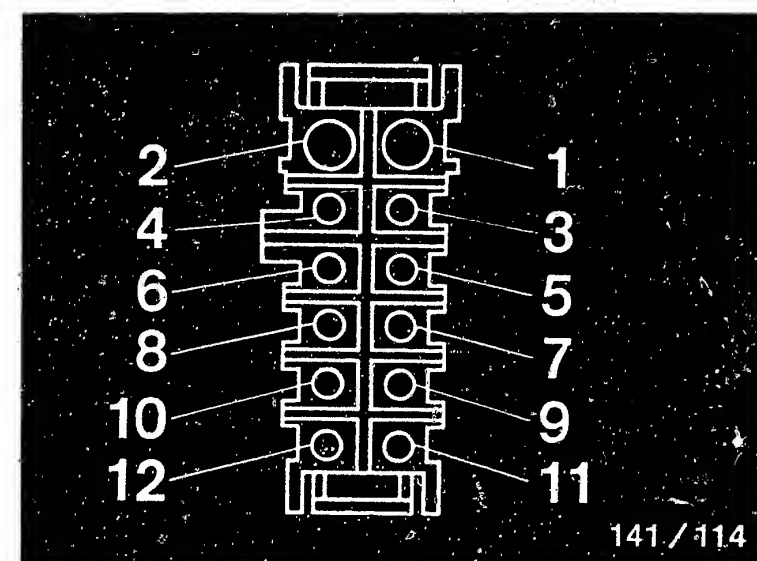
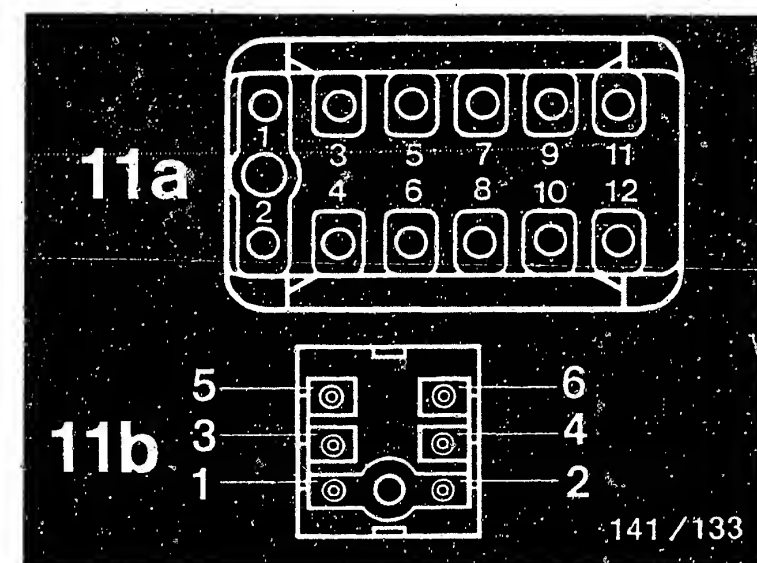
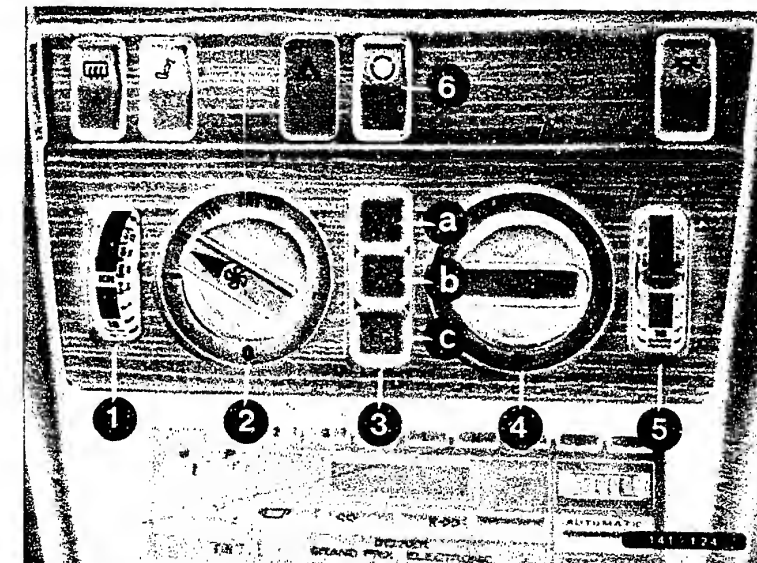
Reading should be $\infty\Omega$

(Plug of control panel disconnected).

If leads O.K., try replacing air conditioning
switch.

Note:

Air conditioning switch is not supplied by Bosch.



yes

Continued on next
picture page

C21

Trouble-shooting

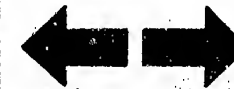
Mercedes-Benz W 124



C22

Trouble-shooting

Mercedes-Benz W 124



Test step 13

Operation:

Rotary switch position (S1): 15

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running.

Blower switch to position IIII

Additional operation:

Air conditioning switch to position "c" (EC mode)

Reading on test adapter:

0 ... 3

Testing of:

Power supply to compressor clutch (air conditioning switch).

Test specification within tolerance?

no

Malfunction:

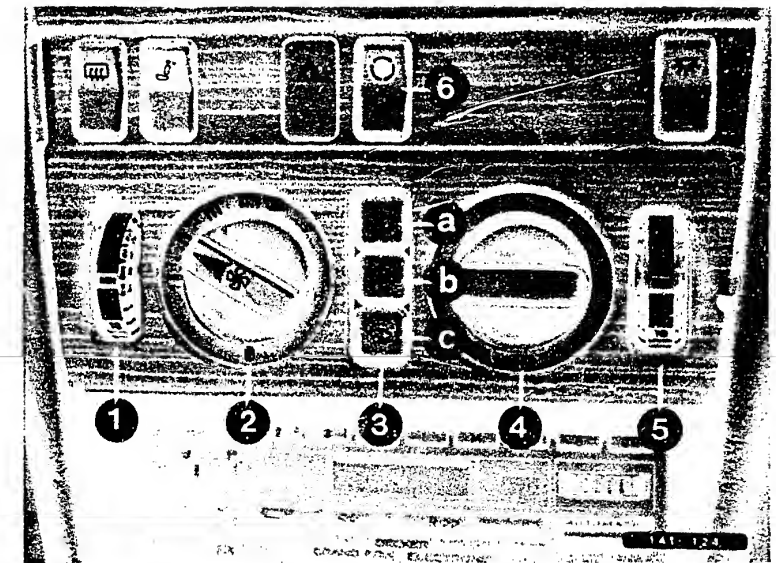
Reading greater than 3

Trouble-shooting:

Try replacing air conditioning switch.

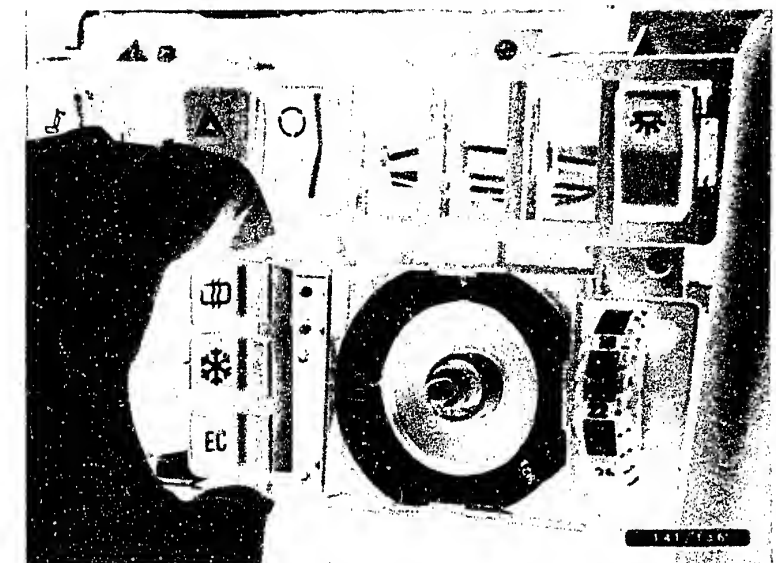
Air conditioning switch is plugged into control panel (see center picture).

Note: Air conditioning switch is not supplied by Bosch



yes

Continued on next picture page



C23

Trouble-shooting

Mercedes-Benz W 124



C24

Trouble-shooting

Mercedes-Benz W 124



Test step 13.1:

Operation:

Rotary switch position (S1): 15

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Blower switch to position IIII

Additional operation:

Air conditioning switch to position "b" (DEF mode).

Reading on test adapter:

10 ... 15

Testing of:

Power supply to compressor clutch

Test specification within tolerance?

no

Malfunction:

Reading < 10 or > 15

Trouble-shooting with multimeter:

Switch off ignition.

Using ohmmeter, check the following leads for open circuit:

- from control-unit plug (11b) socket 3 to plug-in base of compressor cutoff control unit (see bottom picture, arrow) socket 10
- from control-unit plug (11b) socket 4 to plug of control panel socket 8

Reading should be approx. 0 Ω

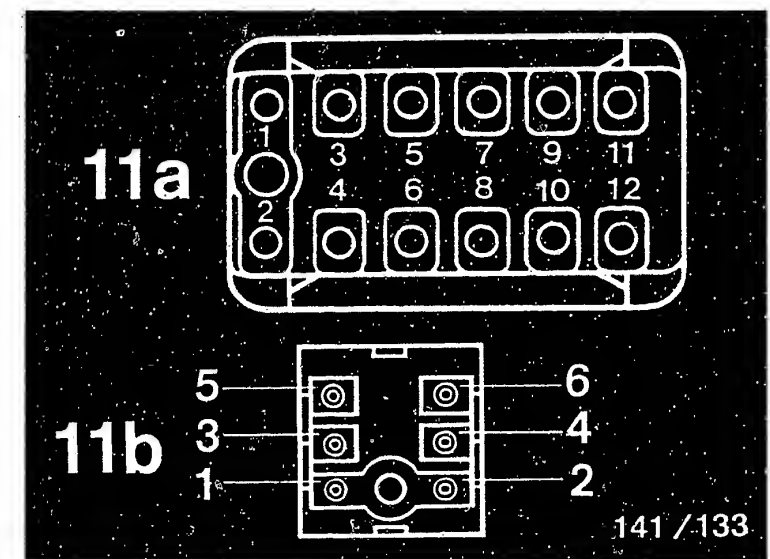
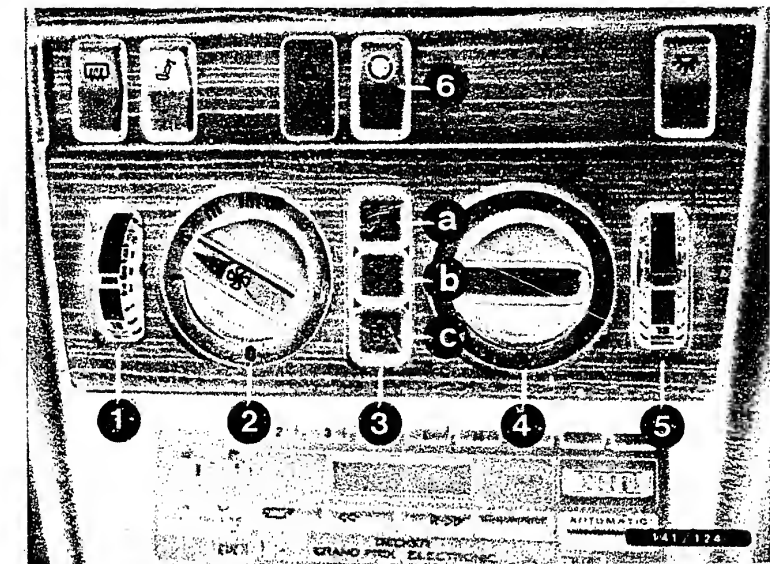
Switch on ignition.

Using voltmeter, check at plug of control panel socket 6 to socket 9.

Reading should be approx. V_B

Eliminate contact resistance/open circuits on leads.

If reading > 15, alternator regulator is defective.



D1

Trouble-shooting

Mercedes-Benz W 124



D2

Trouble-shooting

Mercedes-Benz W 124



Test step 13.2:

Operation:

Rotary switch position
(S1): 15

Measuring equipment:

Test adapter

Measuring range:

0 ... 15

Operation in vehicle:

Engine running

Blower switch to position IIII

Additional operation:

Air conditioning switch to
position "a" (AC mode)

Reading on test adapter:

10 ... 15

Testing of:

Power supply to compressor
clutch

Test specification within
tolerance?

yes

Continued on next
picture page

no

Malfunction:

Reading < 10 or > 15

Trouble-shooting with multimeter:

Switch off ignition.

Using ohmmeter, check the following leads for
open circuit:

- from control-unit plug (11b) socket 3 to
plug-in base of compressor cutoff control
unit (see bottom picture, arrow) socket 10
- from control-unit plug (11b) socket 4 to
plug of control panel socket 8

Reading should be approx. 0 Ω

Switch on ignition.

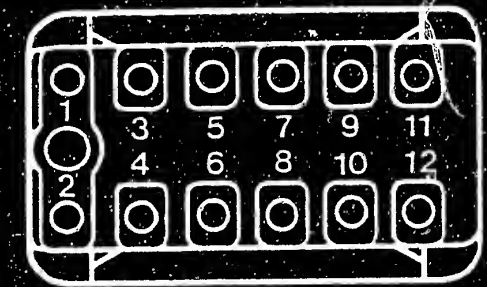
Using voltmeter, check at plug of control panel
socket 6 to socket 9.

Reading should be approx. V_B

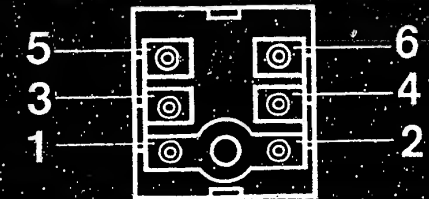
Eliminate contact resistance/open circuits on
leads.

If reading > 15, alternator regulator is
defective.

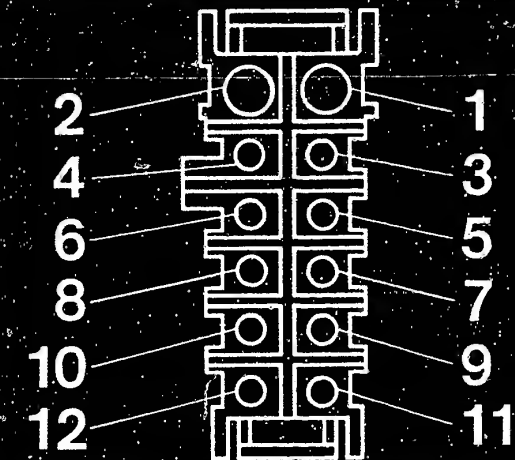
11a



11b



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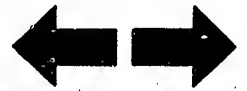
D3

Trouble-shooting
Mercedes-Benz W 124



D4

Trouble-shooting
Mercedes-Benz W 124



Testing with the heating/air conditioning test adapter is now completed.

Set rotary switch (S1) on test adapter to "0".

Switch off ignition.

Disconnect adapter lead KDHK 0008 from control-unit plug and connect control-unit plug to control unit.



Test step: 14

Testing of: Operation of fresh-air/recirculated-air flap control (see center picture)

Operation in vehicle:

Switch on ignition.
Fresh-air/recirculated-air switch in recirculated-air position.

Test specification:

Fresh-air/recirculated-air flap must switch.
By listening, check whether fresh-air/recirculated-air flap is being energized.
Does fresh-air/recirculated-air flap switch?

yes

Fresh-air/recirculated-air switch and flap O.K.

no

Trouble-shooting

Using ohmmeter, from plug of control panel term. 5 (see bottom picture) through fresh-air/recirculated-air switch to plug of change-over valve (located at bottom on change-over valve, see center picture).

Reading should be approx. 0 Ω

- from plug of control panel term. 7 to plug of fresh-air/recirculated-air switch term. 2

Reading should be approx. 0 Ω

- from plug of control panel term. 3 to plug of fresh-air/recirculated-air switch term. 3

Reading should be approx. 0 Ω

- from plug of fresh-air/recirculated-air switch term. 5 to ground

Reading should be 0 Ω

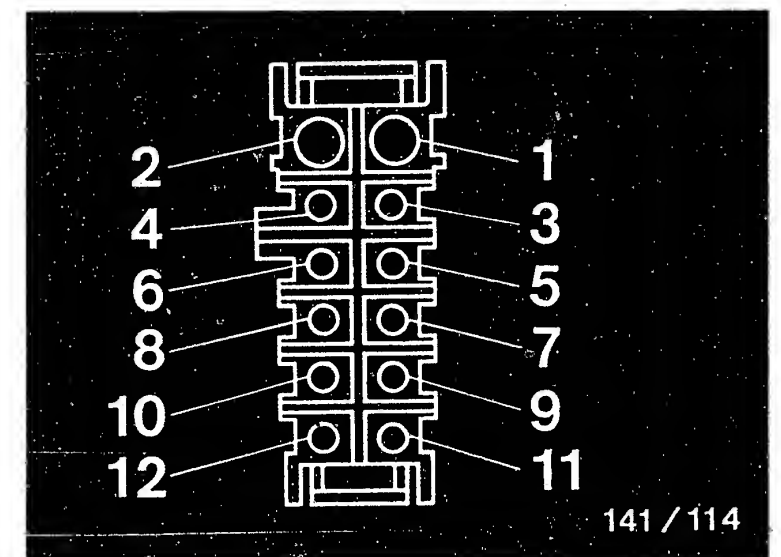
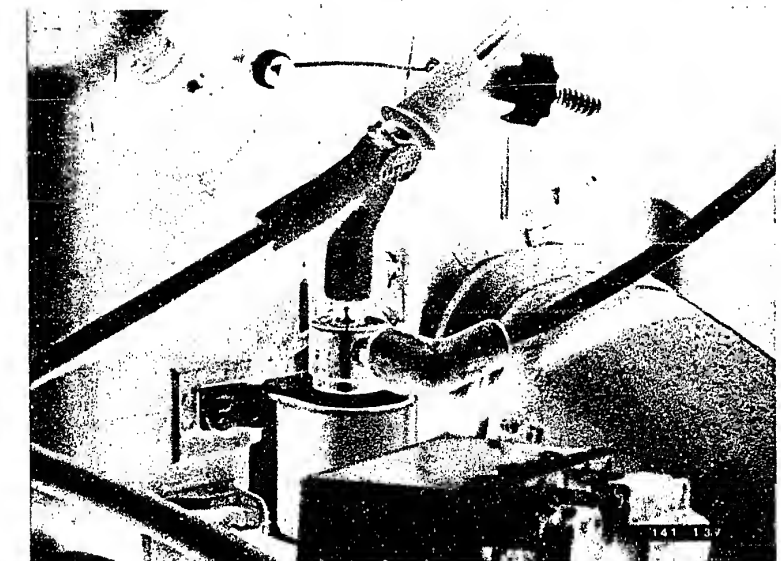
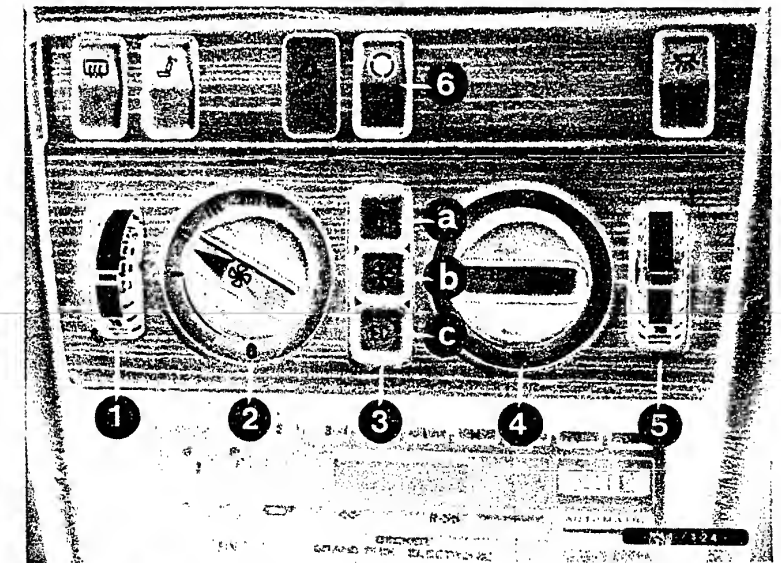
Check resistance directly between pins of change-over valve:

Reading should be approx. 50...80 Ω

Check vacuum system for leaks.

Corrective action:

Eliminate contact resistances/open circuits on leads. Replace fresh-air/recirculated-air switch (not supplied by Bosch).
Try replacing control panel.



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D6

Trouble-shooting

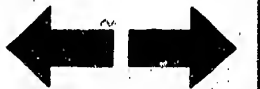
Mercedes-Benz W 124



D7

Trouble-shooting

Mercedes-Benz W 124



If, when testing the automatic heating and air conditioning system, no fault has been found on the individual components, but the system is still malfunctioning, try replacing the electronic control unit.

^E Connect control-unit plug to electronic control unit. Then check the system once again in accordance with the vehicle owner manual.



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